Service Manual

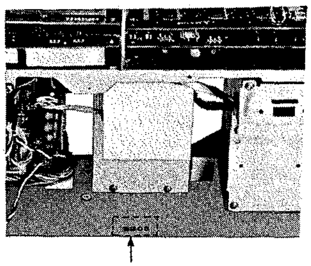
Radio

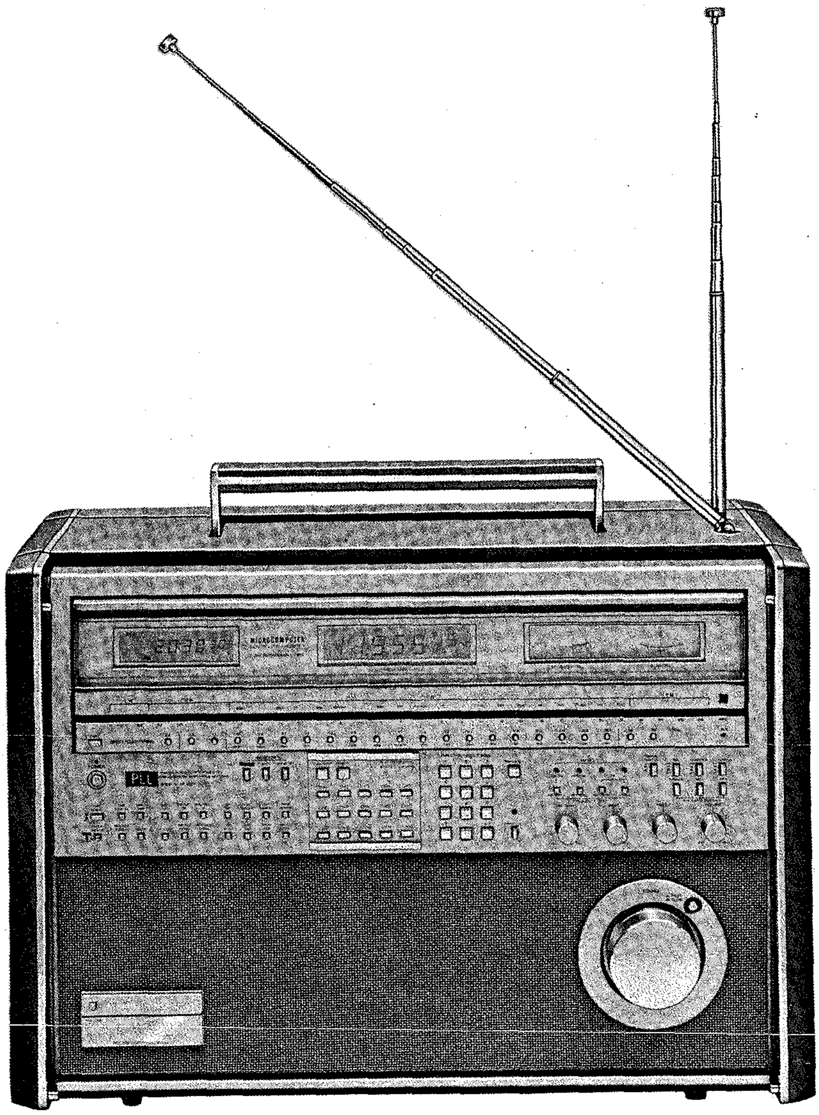
RF-9000

FM/LW/MW/SW World-wide Receiver
With Phase-Locked Loop Synthesizer

Main Change
- *Change of circuit board.

How to Distinguish the model between RF-9000 and RF-9000 supplement-1.
- *Production incorporating this change from unit NO. 171.
  (Circuit Board of 11 UP and 12 UP has been changed from unit NO. 121.)





National Panasonic

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka, Japan

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1. FEATURES

[Radio Section]

- PLL (Phase-Locked-Loop) synthesizer FM/LW/MW/SW world-wide receiver.
- Direct-access tuning
  This function allows a broadcast to be received immediately simply by depressing the key.
- 15-station preset tuning
- Direct touch tuning by 22 touch keys
- 3-step AM bandwidth selector
- LSB, USB and CW operation
- AM frequency step selector
- Meter for FM center tuning, signal strength and battery check
- Separate bass and treble controls
- RF gain control
- Automatic noise limiter (ANL)
- Loudness switch
- Tweeter on/off switch
- Tuning speed selector (FAST/SLOW)
- 30-LED frequency indication

[Clock section]

- 7-day programmable timer
  The programming function makes it possible to set any desired frequency (FM, LW, MW or SW) to be received at any desired time.
- LCD quartz clock for month, date, day of the week indication
- Battery back-up for clock and memory
- Dual Time Display
- 12/24 HR. Display
- Time Signal

2. SPECIFICATIONS

LW/MW/SW (1.6110~2.9009 MHz)

Frequency Range:	LW	150.0~420.0 kHz (2000~714.3 m)
	MW	520.0~1610.9 kHz (576.9~186.2 m)
	SW	1.6110~2.9009 MHz (186.2~103.4 m)
Type:	Single Superheterodyne with Phase-Locked-Loop Synthesizer	
IF:	455 kHz	
Sensitivity:	S/N 6 dB	(Modulation 400 Hz, 30%, for 50 mW)
	LW 1 μV	
	MW 1 μV	
	SW 1 μV	
Selectivity:	WIDE	±2.4 kHz (−6 dB) ±5 kHz (−60 dB)
	MED.	±1.6 kHz (−6 dB) ±3.2 kHz (−60 dB)
	NARROW	±1.2 kHz (−6 dB) ±2.3 kHz (−60 dB)
Image Interference Ratio:	LW	120 dB (at 280 kHz)
	MW	80 dB (at 1000 kHz)
	SW	60 dB (at 2.3 MHz)

SW (2.9010~30.0000 MHz)

Frequency Range:	2.9010~30.000MHz (103.4~10 m)		
Type:	Double Superheterodyne with Phase-Locked-Loop Synthesizer		
IF:	1st IF 46.125 MHz 2nd IF 455 kHz		
Sensitivity:	SW 0.5~1 μV (S/N 6 dB) SSB/CW 0.2 μV (S/N 6 dB) (Modulation 400 Hz, 30%, for 50 mW)		
Selectivity:	WIDE	±2.4 kHz (−6 dB) ±5 kHz (−60 dB)	
	MED.	±1.6 kHz (−6 dB) ±3.2 kHz (−60 dB)	
	NARROW	±1.2 kHz (−6 dB) ±2.3 kHz (−60 dB)	
Image Interference Ratio:		1st 100 dB	2nd 70 dB

FM

Frequency Range:	87.5~108 MHz
Type:	Single Superheterodyne with Phase-Locked-Loop Synthesizer
IF:	10.7 MHz
Sensitivity:	1.5 μV/75Ω (−3 dB, Limit. Sens.) 2 μV/75Ω (S/N 26 dB)
Two-Signal Selectivity:	70 dB (±400 kHz)
Image Interference Ratio:	60 dB (at 98 MHz)

Frequency Display

Display Type:	LCD (Liquid Crystal Display)
Precision:	Direct Readout to 100 Hz for SSB/CW/AM Direct Readout to 10 kHz for FM
Number of Figures:	6 digits
Frequency Stability:	Within 100 Hz during any 60 minutes after warm-up time

SSB/CW/AM
Direktanzeige bis 10 kHz für UKW

Zahlen: 6 Stellen

Frequenzstabilität: Innerhalb von 100 Hz während beliebiger 60 Minuten nach Erwärmung

Abstimmung

		Schnell	Langsam
Frequenzstufen:	SSB/CW	500 Hz	100 Hz
	AM	100 Hz/500 Hz	100 Hz
		1 kHz/5 kHz	1 kHz
	UKW	50 kHz	10 kHz

Abstimmgeschwindigkeitsverhältnis: Schnell:langsam=5:1

Festsenderspeicher

Anzahl der Festsender: 15

Uhr/Zeitschaltuhr/Kalender

Typ: Quarzuhr mit Flüssigkristallanzeige/
Auf 7 Tage programmierbare Zeitschaltuhr

Funktionen: Gegenwärtige Uhrzeit (Stunde, Minute, Sekunde)
Kalender (Monat, Datum, Tag)
Doppelzeit
Zeitzeichen
12/24-Stunden-Einstellung
Schlafzeit
Gleichstrom-Zeitschaltuhr-Ausgangsregelung
6. Empfangsautomatik
① Wiederholter wöchentlicher Betrieb, täglich
② Wiederholter wöchentlicher Betrieb, einmal pro Woche
③ Wiederholter wöchentlicher Betrieb, an 6 Tagen
④ Wiederholter wöchentlicher Betrieb, zweimal pro Woche
⑤ Wiederholter wöchentlicher Betrieb, an 5 Tagen
⑥ Einmaliger Betrieb, nur an einem Wochentag
Von den obigen 6 Programmtypen können bis zu 4 im Speicher gespeichert werden.

Ganggenauigkeit: Monatliche Abweichung ±15 Sekunden
(16°C Temperatur 50% Feuchtigkeit)

Allgemeine Daten

Bestückung: 41 integrierte Schaltkreise
174 Transistoren
21 Feldeffekttransistoren

Ausgangsleistung: Gleichstrom: max. 10 W
Netzstrom: max. Ausgangsleistung, Modulation 400 Hz

Lautsprecher: Zweiweg-Lautsprechersystem
18×12 cm, Ovaltyp (4 Ohm)
6,5 cm (4 Ohm)

Stromversorgung: Netzstrom: 100~110/115~127/
200~220/230~250 V,
50/60 Hz
Gleichstrom: 18 V (12×UM-1, "D")
3 V (2×UM-3, "AA")... Reservestromversorgung für Speicher und Uhr
Gleichstromeingang: 12~18 V

Leistungsaufnahme: 35 W

Buchsen: Ohrhörerausgang (3,5∅)
Kopfhörerausgang (6∅)
Aufnahmeausgang (3,5∅, 8 Kiloohm)
Aufnahmeausgang (DIN, 80 Kiloohm)
Reserveeingang (3,5∅, 570 Kiloohm)
Reserveeingang (DIN, 570 Kiloohm)
MPX-Ausgang (3,5∅, 5 Kiloohm)
Außenlautsprecherausgang (3,5∅, 4~8 Ohm)
Außenlautsprecherausgang (DIN, 4~8 Ohm)
Netzstromeingang
Gleichstromeingang
Gleichstrom-Zeitschaltuhrausgang

Antennen: UKW; Teleskopantenne, 100 cm
Außenantenne (Schnellanschluß, 75 Ohm)
Außenantenne (DIN-Anschluß, 300 Ohm)
LW; Ferritkernantenne, 12∅×200 mm
MW/KW (1,6110~2,9009 MHz);
Ferritkernantenne, 12∅×200 mm
KW (2,9010~30,0000 MHz);
Teleskopantenne, 150 cm
LW/MW/KW;
Außenantenne (Schnellanschluß, 75 Ohm)
Außenantenne (DIN-Anschluß, 75 Ohm)

Abmessungen: 520×362×206 mm
(B×H×T) (20-1/2×14-1/4×8-1/8")

Gewicht: 20,3 kg (44 lb. 14,1 oz)

Änderungen der technischen Daten jederzeit vorbehalten.

Tuning

Frequency Step:

	Fast	Slow
SSB/CW	500 Hz	100 Hz
AM 100/500 Hz	500 Hz	100 Hz
1/5 kHz	5 kHz	1 kHz
FM	50 kHz	10 kHz

Tuning Speed Ratio: Fast:Slow=5:1

Preset Memory

Number of Preset: 15-Station Preset

Clock/Timer/Calendar

Type:	LCD Quartz Clock/7-day Programmable Timer
Function:	Real Time (Hour, Minute, Second) Calendar (Month, Date, Day) Dual Time Time Signal 12/24 Hour Setting Sleep DC Timer out Control 6 Automatic Reception Mode ① Repeated weekly operation for daily ② Repeated weekly operation for once a week ③ Repeated weekly operation for every day but one ④ Repeated weekly operation for twice a week ⑤ Repeated weekly operation for every day but two ⑥ Single-time operation for one day of the week only of the above 6 types of programs, up to 4 can be stored in memory.
Precision:	Monthly Difference ±15 seconds (16°C temperature, 50% humidity)

General Specifications

Semi-Conductors:	IC	41
	Transistor	174
	FET	21

Output Power:	7 W (60%, MOD. 400 Hz) 10 W (AC, MPO)
Speaker:	2 way Speaker System 18×12 cm Oval Type (4Ω) 6.5 cm (4Ω)
Power Source:	AC 100~110/115~127/200~220/230~250 V, 50/60 Hz DC 18 V (12×UM-1, "D") 3 V (2×UM-3, "AA") . . . Back-up for Memory & Clock DC in 12~18 V
Power consumption:	35 W
Jacks:	Earphone out (3.5∅) Headphone out (6∅) Rec. out (3.5∅, 8 kΩ) Rec. out (DIN, 80 kΩ) AUX in (3.5∅, 570 kΩ) AUX in (DIN, 570 kΩ) MPX out (3.5∅, 5 kΩ) External Speaker out (3.5∅, 4~8Ω) External Speaker out (DIN, 4~8Ω) AC in DC in DC Timer out
Antenna:	FM Whip Antenna 100 cm Ext. Ant. (one-touch, 75Ω) Ext. Ant. (DIN, 300Ω) LW Ferrite Core Antenna 12∅×200 mm MW/SW (1.6110~2.9009 MHz) Ferrite Core Antenna 12∅×200 mm SW (2.9010~30.0000 MHz) Whip Antenna 150 cm LW/MW/SW External Antenna (one-touch, 75Ω) External Antenna (DIN, 75Ω)
Dimensions: (W×H×D)	520×362×206 mm (20-1/2"×14-1/4"×8-1/8")
Weight:	20.3 kg (44 lb. 14.1 oz) without batteries

Specifications subject to change without notice.

1. MERKMALE

[Radio-Teil]

- UKW/LW/MW/KW-Phasengegenkopplungsempfänger mit Frequenzsynthese für weltweiten Empfang.
- Direktzugangsabstimmung. Diese Funktion ermöglicht den sofortigen Empfang eines Senders, indem einfach die entsprechende Taste niedergedrückt wird.
- Vorabstimmung von bis zu 15 Sendern.
- Direktberührungsabstimmung über 22 Berührungstasten.
- AM-Bandbreiten-Wahlschalter mit 3 Stellungen.
- USB-, OSB- und ungedämpfter Wellenbetrieb.
- AM-Frequenzstufen-Wahlschalter.
- Anzeigeinstrument für UKW-Mittenabstimmung, Feldstärke und Batterieprüfung.
- Separate Baß- und Höhenregler.
- HF-Verstärkungsregler.
- Automatische Störkrachbegrenzung (ANL).
- Schalter für gehörrichtige Lautstärke.
- Ein-Aus-Schalter für Hochtöner.
- Abstimmgeschwindigkeits-Wahlschalter (Pangsam/schnell).
- Frequenzanzeige mit 30 Leuchtdioden.

[Uhr-Teil]

- Auf 7 Tage programmierbare Zeitschaltuhr. Die Programmierfunktion ermöglicht die Einstellung jeder gewünschten Frequenz (UKW, LW, MW oder KW) auf Empfang zu einer beliebigen Zeit.
- Quarzuhr mit Flüssigkristallanzeige für Monats-, Monatstag- und Wochentaganzeige. Die Uhr ist mit Mikrocomputerkreisen bestückt, so daß ein zuverlässiger Betrieb gewährleistet ist.
- Batterie-Reservestromversorgung für Uhr und Speicher.
- Doppelzeitanzeigetaste
- 12/24-Stundenanzeige-Wahltaste
- Zeitzeichen

2. TECHNISCHE DATEN

LW/MW/KW (1,6110~2,9009 MHz)

Frequenzbereiche:	LW: 150,0~420,0 kHz (2000~714,3 m) MW: 520,0~1610,9 kHz (576,9~186,2 m) KW: 1,6110~2,9009 MHz (186,2~103,4 m)	
Typ:	Einzelsuperhet mit Phasengegenkopplung und Frequenzsynthese	
ZF:	455 kHz	
Empfindlichkeit:	Rauschab- stand 6 dB LW: 1 µV MW: 1 µV KW: 1 µV	(Modulation 400 Hz, 30%, füt 50 mW)
Trennschärfe:	Breitband:	±2,4 kHz (−6 dB) ±5 kHz (−60 dB)
	Mittelband:	±1,6 kHz (−6 dB) ±3,2 kHz (−60 dB)
	Schmalband:	±1,2 kHz (−6 dB) ±2,3 kHz (−60 dB)
Spiegelselektion:	LW: 120 dB (bei 280 kHz) MW: 80 dB (bei 1000 kHz) KW: 60 dB (bei 2,3 MHz)	

KW (2,9010~30,0000 MHz)

Frequenzbereich:	2,9010~30,0000 MHz (103,4~10 m)	
Typ:	Doppelsuperhet mit Phasengegenkopplung und Frequenzsynthese	
ZF:	1. ZF: 46,125 MHz 2. ZF: 455 kHz	
Empfindlichkeit:	KW 0,5~1 µV (Rauschabstand 6 dB) SSB/CW 0,2 µV (Rauschabstand 6 dB) (Modulation 400 Hz, 30%, für 50 mW)	
Trennschärfe:	Breitband:	±2,4 kHz (−6 dB) ±5 kHz (−60 dB)
	Mittelband:	±1,6 kHz (−6 dB) ±3,2 kHz (−60 dB)
	Schmalband:	±1,2 kHz (−6 dB) ±2,3 kHz (−60 dB)
Spiegelselektion:	1. 100 dB	2. 70 dB

UKW

Frequenzbereich:	87,5~108 MHz
Typ:	Einzelsuperhet mit Phasengegenkopplung und Frequenzsysnthese
ZF:	10,7 MHz
Empfindlichkeit:	1,5 µV/75Ω (−3 dB, Grenzempfindlichkeit) 2 µV/75Ω (Rauschabstand 26 dB)
Zweisignal-Trennschärfe:	70 dB (±400 kHz)
Spiegelselektion:	60 dB (bei 98 MHz)

Frequenzzähler

Anzeige:	Flüssigkristallanzeige
Genauigkeit:	Direktanzeige bis 100 Hz für

1. MERKMALE

[Radio-Teil]

- UKW/LW/MW/KW-Phasengegenkopplungsempfänger mit Frequenzsynthese für weltweiten Empfang.
- Direktzugangsabstimmung.
  Diese Funktion ermöglicht den sofortigen Empfang eines Senders, indem einfach die entsprechende Taste niedergedrückt wird.
- Vorabstimmung von bis zu 15 Sendern.
- Direktberührungsabstimmung über 22 Berührungstasten.
- AM-Bandbreiten-Wahlschalter mit 3 Stellungen.
- USB-, OSB- und ungedämpfter Wellenbetrieb.
- AM-Frequenzstufen-Wahlschalter.
- Anzeigeinstrument für UKW-Mittenabstimmung, Feldstärke und Batterieprüfung.
- Separate Baß- und Höhenregler.
- HF-Verstärkungsregler.
- Automatische Störkrachbegrenzung (ANL).
- Schalter für gehörrichtige Lautstärke.
- Ein-Aus-Schalter für Hochtöner.
- Abstimmgeschwindigkeits-Wahlschalter (Pangsam/schnell).
- Frequenzanzeige mit 30 Leuchtdioden.

[Uhr-Teil]

- Auf 7 Tage programmierbare Zeitschaltuhr.
  Die Programmierfunktion ermöglicht die Einstellung jeder gewünschten Frequenz (UKW, LW, MW oder KW) auf Empfang zu einer beliebigen Zeit.
- Quarzuhr mit Flüssigkristallanzeige für Monats-, Monatstag- und Wochentaganzeige.
  Die Uhr ist mit Mikrocomputerkreisen bestückt, so daß ein zuverlässiger Betrieb gewährleistet ist.
- Batterie-Reservestromversorgung für Uhr und Speicher.
- Doppelzeitanzeigetaste
- 12/24-Stundenanzeige-Wahltaste
- Zeitzeichen

2. TECHNISCHE DATEN

LW/MW/KW (1,6110~2,9009 MHz)

Frequenzbereiche:	LW: 150,0~420,0 kHz (2000~714,3 m) MW: 520,0~1610,9 kHz (576,9~186,2 m) KW: 1,6110~2,9009 MHz (186,2~103,4 m)	
Typ:	Einzelsuperhet mit Phasengegenkopplung und Frequenzsynthese	
ZF:	455 kHz	
Empfindlichkeit:	Rauschab-stand 6 dB LW: 1 μV MW: 1 μV KW: 1 μV	(Modulation 400 Hz, 30%, füt 50 mW)
Trennschärfe:	Breitband:	±2,4 kHz (−6 dB) ±5 kHz (−60 dB)
	Mittelband:	±1,6 kHz (−6 dB) ±3,2 kHz (−60 dB)
	Schmalband:	±1,2 kHz (−6 dB) ±2,3 kHz (−60 dB)
Spiegelselektion:	LW: 120 dB (bei 280 kHz) MW: 80 dB (bei 1000 kHz) KW: 60 dB (bei 2,3 MHz)	

KW (2,9010~30,0000 MHz)

Frequenzbereich:	2,9010~30,0000 MHz (103,4~10 m)	
Typ:	Doppelsuperhet mit Phasengegenkopplung und Frequenzsynthese	
ZF:	1. ZF: 46,125 MHz 2. ZF: 455 kHz	
Empfindlichkeit:	KW 0,5~1 μV (Rauschabstand 6 dB) SSB/CW 0,2 μV (Rauschabstand 6 dB) (Modulation 400 Hz, 30%, für 50 mW)	
Trennschärfe:	Breitband:	±2,4 kHz (−6 dB) ±5 kHz (−60 dB)
	Mittelband:	±1,6 kHz (−6 dB) ±3,2 kHz (−60 dB)
	Schmalband:	±1,2 kHz (−6 dB) ±2,3 kHz (−60 dB)
Spiegelselektion:	1. 100 dB	2. 70 dB

UKW

Frequenzbereich:	87,5~108 MHz
Typ:	Einzelsuperhet mit Phasengegenkopplung und Frequenzsysnthese
ZF:	10,7 MHz
Empfindlichkeit:	1,5 μV/75Ω (−3 dB, Grenzempfindlichkeit) 2 μV/75Ω (Rauschabstand 26 dB)
Zweisignal-Trennschärfe:	70 dB (±400 kHz)
Spiegelselektion:	60 dB (bei 98 MHz)

Frequenzzähler

Anzeige:	Flüssigkristallanzeige
Genauigkeit:	Direktanzeige bis 100 Hz für

Tuning

Frequency Step:

		Fast	Slow
SSB/CW		500 Hz	100 Hz
AM	100/500 Hz	500 Hz	100 Hz
	1/5 kHz	5 kHz	1 kHz
FM		50 kHz	10 kHz

Tuning Speed Ratio: Fast:Slow=5:1

Preset Memory

Number of Preset: 15-Station Preset

Clock/Timer/Calendar

Type: LCD Quartz Clock/7-day Programmable Timer

Function: Real Time (Hour, Minute, Second)
Calendar (Month, Date, Day)
Dual Time
Time Signal
12/24 Hour Setting
Sleep
DC Timer out Control
6 Automatic Reception Mode
① Repeated weekly operation for daily
② Repeated weekly operation for once a week
③ Repeated weekly operation for every day but one
④ Repeated weekly operation for twice a week
⑤ Repeated weekly operation for every day but two
⑥ Single-time operation for one day of the week only
of the above 6 types of programs, up to 4 can be stored in memory.

Precision: Monthly Difference ±15 seconds
(16°C temperature, 50% humidity)

General Specifications

Semi-Conductors: IC 41
Transistor 174
FET 21

Output Power: 7 W (60%, MOD. 400 Hz)
10 W (AC, MPO)

Speaker: 2 way Speaker System
18×12 cm Oval Type (4Ω)
6.5 cm (4Ω)

Power Source: AC 100~110/115~127/200~220/230~250 V, 50/60 Hz
DC 18 V (12×UM-1, "D")
3 V (2×UM-3, "AA") . . . Back-up for Memory & Clock
DC in 12~18 V

Power consumption: 35 W

Jacks: Earphone out (3.5Ø)
Headphone out (6Ø)
Rec. out (3.5Ø, 8 kΩ)
Rec. out (DIN, 80 kΩ)
AUX in (3.5Ø, 570 kΩ)
AUX in (DIN, 570 kΩ)
MPX out (3.5Ø, 5 kΩ)
External Speaker out (3.5Ø, 4~8Ω)
External Speaker out (DIN, 4~8Ω)
AC in
DC in
DC Timer out

Antenna: FM Whip Antenna 100 cm
Ext. Ant. (one-touch, 75Ω)
Ext. Ant. (DIN, 300Ω)
LW Ferrite Core Antenna 12Ø×200 mm
MW/SW (1.6110~2.9009 MHz)
Ferrite Core Antenna 12Ø×200 mm
SW (2.9010~30.0000 MHz)
Whip Antenna 150 cm
LW/MW/SW
External Antenna (one-touch, 75Ω)
External Antenna (DIN, 75Ω)

Dimensions: (W×H×D) 520×362×206 mm
(20-1/2"×14-1/4"×8-1/8")

Weight: 20.3 kg (44 lb. 14.1 oz)
without batteries

Specifications subject to change without notice.

SSB/CW/AM
Direktanzeige bis 10 kHz für UKW

Zahlen: 6 Stellen

Frequenzstabilität: Innerhalb von 100 Hz während beliebiger 60 Minuten nach Erwärmung

Abstimmung

		Schnell	Langsam
Frequenzstufen:	SSB/CW	500 Hz	100 Hz
	AM	100 Hz/500 Hz	100 Hz
		1 kHz/5 kHz	1 kHz
	UKW	50 kHz	10 kHz

Abstimmgeschwindigkeitsverhältnis: Schnell:langsam=5:1

Festsenderspeicher

Anzahl der Festsender: 15

Uhr/Zeitschaltuhr/Kalender

Typ: Quarzuhr mit Flüssigkristallanzeige/
Auf 7 Tage programmierbare Zeitschaltuhr

Funktionen:
Gegenwärtige Uhrzeit (Stunde, Minute, Sekunde)
Kalender (Monat, Datum, Tag)
Doppelzeit
Zeitzeichen
12/24-Stunden-Einstellung
Schlafzeit
Gleichstrom-Zeitschaltuhr-Ausgangsregelung
6. Empfangsautomatik
① Wiederholter wöchentlicher Betrieb, täglich
② Wiederholter wöchentlicher Betrieb, einmal pro Woche
③ Wiederholter wöchentlicher Betrieb, an 6 Tagen
④ Wiederholter wöchentlicher Betrieb, zweimal pro Woche
⑤ Wiederholter wöchentlicher Betrieb, an 5 Tagen
⑥ Einmaliger Betrieb, nur an einem Wochentag
Von den obigen 6 Programmtypen können bis zu 4 im Speicher gespeichert werden.

Ganggenauigkeit: Monatliche Abweichung ±15 Sekunden (16°C Temperatur 50% Feuchtigkeit)

Allgemeine Daten

Bestückung:
41 integrierte Schaltkreise
174 Transistoren
21 Feldeffekttransistoren

Ausgangsleistung:
Gleichstrom: max. 10 W
Netzstrom: max. Ausgangsleistung, Modulation 400 Hz

Lautsprecher:
Zweiweg-Lautsprechersystem
18×12 cm, Ovaltyp (4 Ohm)
6,5 cm (4 Ohm)

Stromversorgung:
Netzstrom: 100~110/115~127/200~220/230~250 V, 50/60 Hz
Gleichstrom: 18 V (12×UM-1, "D")
3 V (2×UM-3, "AA")... Reservestromversorgung für Speicher und Uhr
Gleichstromeingang: 12~18 V

Leistungsaufnahme: 35 W

Buchsen:
Ohrhörerausgang (3,5∅)
Kopfhörerausgang (6∅)
Aufnahmeausgang (3,5∅, 8 Kiloohm)
Aufnahmeausgang (DIN, 80 Kiloohm)
Reserveeingang (3,5∅, 570 Kiloohm)
Reserveeingang (DIN, 570 Kiloohm)
MPX-Ausgang (3,5∅, 5 Kiloohm)
Außenlautsprecherausgang (3,5∅, 4~8 Ohm)
Außenlautsprecherausgang (DIN, 4~8 Ohm)
Netzstromeingang
Gleichstromeingang
Gleichstrom-Zeitschaltuhrausgang

Antennen:
UKW; Teleskopantenne, 100 cm
Außenantenne (Schnellanschluß, 75 Ohm)
Außenantenne (DIN-Anschluß, 300 Ohm)
LW; Ferritkernantenne, 12∅×200 mm
MW/KW (1,6110~2,9009 MHz);
Ferritkernantenne, 12∅×200 mm
KW (2,9010~30,0000 MHz);
Teleskopantenne, 150 cm
LW/MW/KW;
Außenantenne (Schnellanschluß, 75 Ohm)
Außenantenne (DIN-Anschluß, 75 Ohm)

Abmessungen (B×H×T): 520×362×206 mm (20-1/2×14-1/4×8-1/8")

Gewicht: 20,3 kg (44 lb. 14,1 oz)

Änderungen der technischen Daten jederzeit vorbehalten.

1. FEATURES

[Radio Section]

- PLL (Phase-Locked-Loop) synthesizer FM/LW/MW/SW world-wide receiver.
- Direct-access tuning
  This function allows a broadcast to be received immediately simply by depressing the key.
- 15-station preset tuning
- Direct touch tuning by 22 touch keys
- 3-step AM bandwidth selector
- LSB, USB and CW operation
- AM frequency step selector
- Meter for FM center tuning, signal strength and battery check
- Separate bass and treble controls
- RF gain control
- Automatic noise limiter (ANL)
- Loudness switch
- Tweeter on/off switch
- Tuning speed selector (FAST/SLOW)
- 30-LED frequency indication

[Clock section]

- 7-day programmable timer
  The programming function makes it possible to set any desired frequency (FM, LW, MW or SW) to be received at any desired time.
- LCD quartz clock for month, date, day of the week indication
- Battery back-up for clock and memory
- Dual Time Display
- 12/24 HR. Display
- Time Signal

2. SPECIFICATIONS

LW/MW/SW (1.6110~2.9009 MHz)

Frequency Range:	LW 150.0~420.0 kHz (2000~714.3 m) MW 520.0~1610.9 kHz (576.9~186.2 m) SW 1.6110~2.9009 MHz (186.2~103.4 m)	
Type:	Single Superheterodyne with Phase-Locked-Loop Synthesizer	
IF:	455 kHz	
Sensitivity:	S/N 6 dB LW 1μV MW 1μV SW 1μV	(Modulation 400 Hz, 30%, for 50 mW)
Selectivity:	WIDE	±2.4 kHz (−6 dB) ±5 kHz (−60 dB)
	MED.	±1.6 kHz (−6 dB) ±3.2 kHz (−60 dB)
	NARROW	±1.2 kHz (−6 dB) ±2.3 kHz (−60 dB)
Image Interference Ratio:	LW 120 dB (at 280 kHz) MW 80 dB (at 1000 kHz) SW 60 dB (at 2.3 MHz)	

SW (2.9010~30.0000 MHz)

Frequency Range:	2.9010~30.000MHz (103.4~10 m)		
Type:	Double Superheterodyne with Phase-Locked-Loop Synthesizer		
IF:	1st IF 46.125 MHz 2nd IF 455 kHz		
Sensitivity:	SW 0.5~1 μV (S/N 6 dB) SSB/CW 0.2 μV (S/N 6 dB) (Modulation 400 Hz, 30%, for 50 mW)		
Selectivity:	WIDE	±2.4 kHz (−6 dB) ±5 kHz (−60 dB)	
	MED.	±1.6 kHz (−6 dB) ±3.2 kHz (−60 dB)	
	NARROW	±1.2 kHz (−6 dB) ±2.3 kHz (−60 dB)	
Image Interference Ratio:		1st 100 dB	2nd 70 dB

FM

Frequency Range:	87.5~108 MHz
Type:	Single Superheterodyne with Phase-Locked-Loop Synthesizer
IF:	10.7 MHz
Sensitivity:	1.5 μV/75Ω (−3 dB, Limit. Sens.) 2 μV/75Ω (S/N 26 dB)
Two-Signal Selectivity:	70 dB (±400 kHz)
Image Interference Ratio:	60 dB (at 98 MHz)

Frequency Display

Display Type:	LCD (Liquid Crystal Display)
Precision:	Direct Readout to 100 Hz for SSB/CW/AM Direct Readout to 10 kHz for FM
Number of Figures:	6 digits
Frequency Stability:	Within 100 Hz during any 60 minutes after warm-up time

FICHE NO. 879 IV(V).

english	INDEX-I.	deutsch
MODEL RF-9000. **SUPPLEMENT-1.**		**MODELL RF-9000.** **NACHTRAG-1.**

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C.B. (4UP) LW,MW,SW1-VCO Schematic diagram. Xtal,Osc.Mix.	C 5- C 6 C 7- C 8	Platine (4UP) LW,MW,SW1-VCO, Schaltplan. Xtal,Osc. Mix.
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further		weiter
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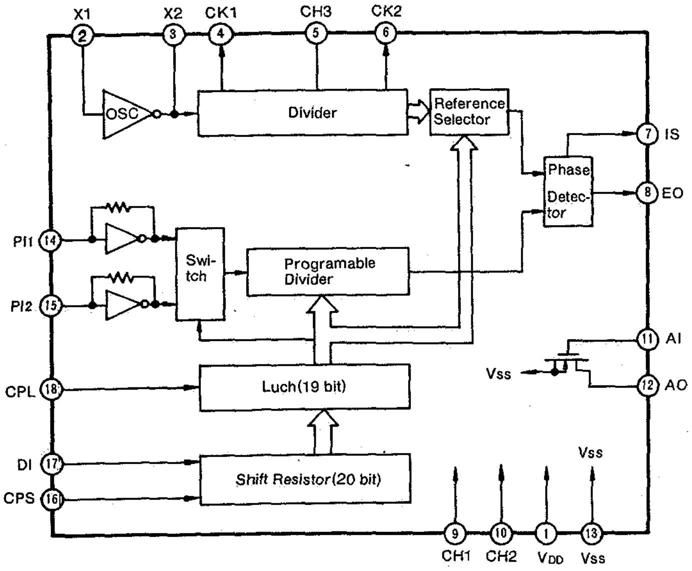
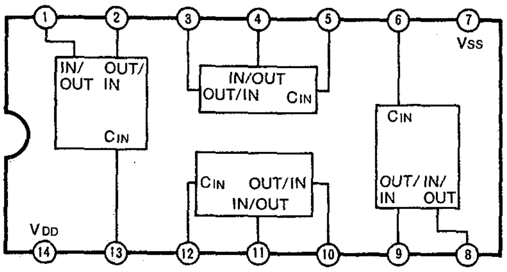
S/M. Order No. RD-8104-1874 S2

S/M.Best.Nr.RD-8104-1874 S2

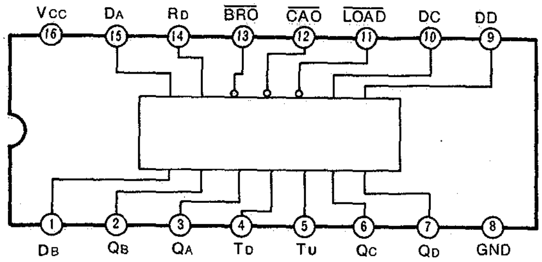
IC809, 810 RVIUPD2819C


X1
X2
CK1
CH3
CK2
OSC
Divider
Reference Selector
Phase Detector
IS
EO
PI1
PI2
Switch
Programable Divider
AI
Vss
AO
CPL
Luch(19 bit)
DI
CPS
Shift Resistor(20 bit)
Vss
CH1
CH2
VDD
Vss

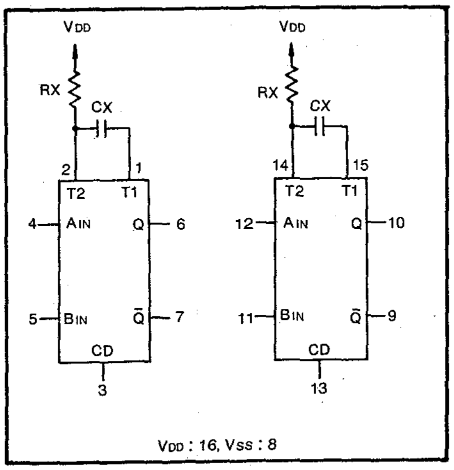
IC807 RVITC4016BP


Vss
IN/OUT OUT/IN
CIN
IN/OUT OUT/IN CIN
CIN OUT/IN IN/OUT
CIN
OUT/IN IN/OUT
VDD

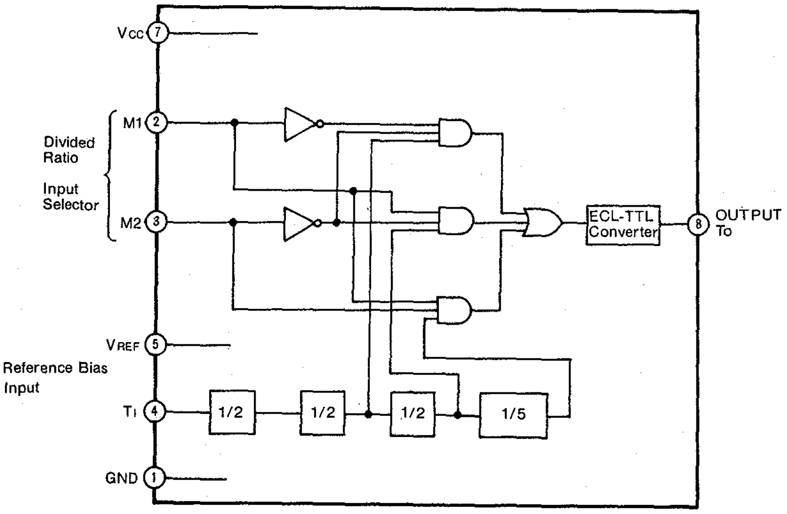
IC803 RVIM74LS192P


VCC
DA
RD
$\overline{BRO}$
$\overline{CAO}$
$\overline{LOAD}$
DC
DD
DB
QB
QA
TD
TU
QC
QD
GND

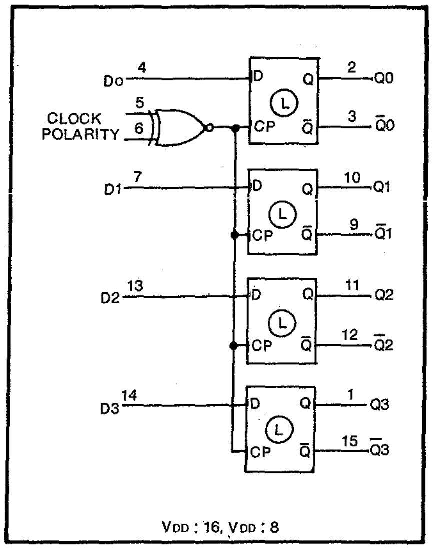
IC811 RVITC4528BP


VDD
RX
CX
T2
T1
AIN
Q
BIN
$\overline{Q}$
CD
VDD : 16, Vss : 8

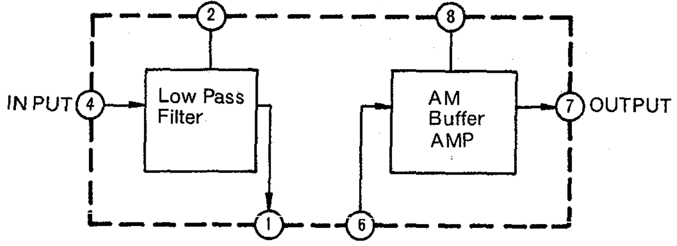
IC801 RVIM54455L


Vcc
M1
Divided Ratio
Input Selector
M2
ECL-TTL Converter
OUTPUT To
VREF
Reference Bias Input
Ti
1/2
1/2
1/2
1/5
GND

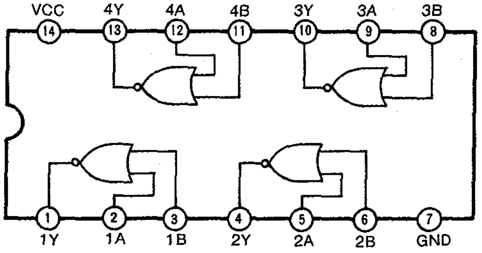
IC806 RVITC4042BP


D0
CLOCK POLARITY
Q0
$\overline{Q0}$
D1
Q1
$\overline{Q1}$
D2
Q2
$\overline{Q2}$
D3
Q3
$\overline{Q3}$
D
CP
Q
$\overline{Q}$
L
VDD : 16, VDD : 8

IC808 AN7911


IN PUT
Low Pass Filter
AM Buffer AMP
OUTPUT

IC802 RVIM74LS02P


VCC
4Y
4A
4B
3Y
3A
3B
1Y
1A
1B
2Y
2A
2B
GND

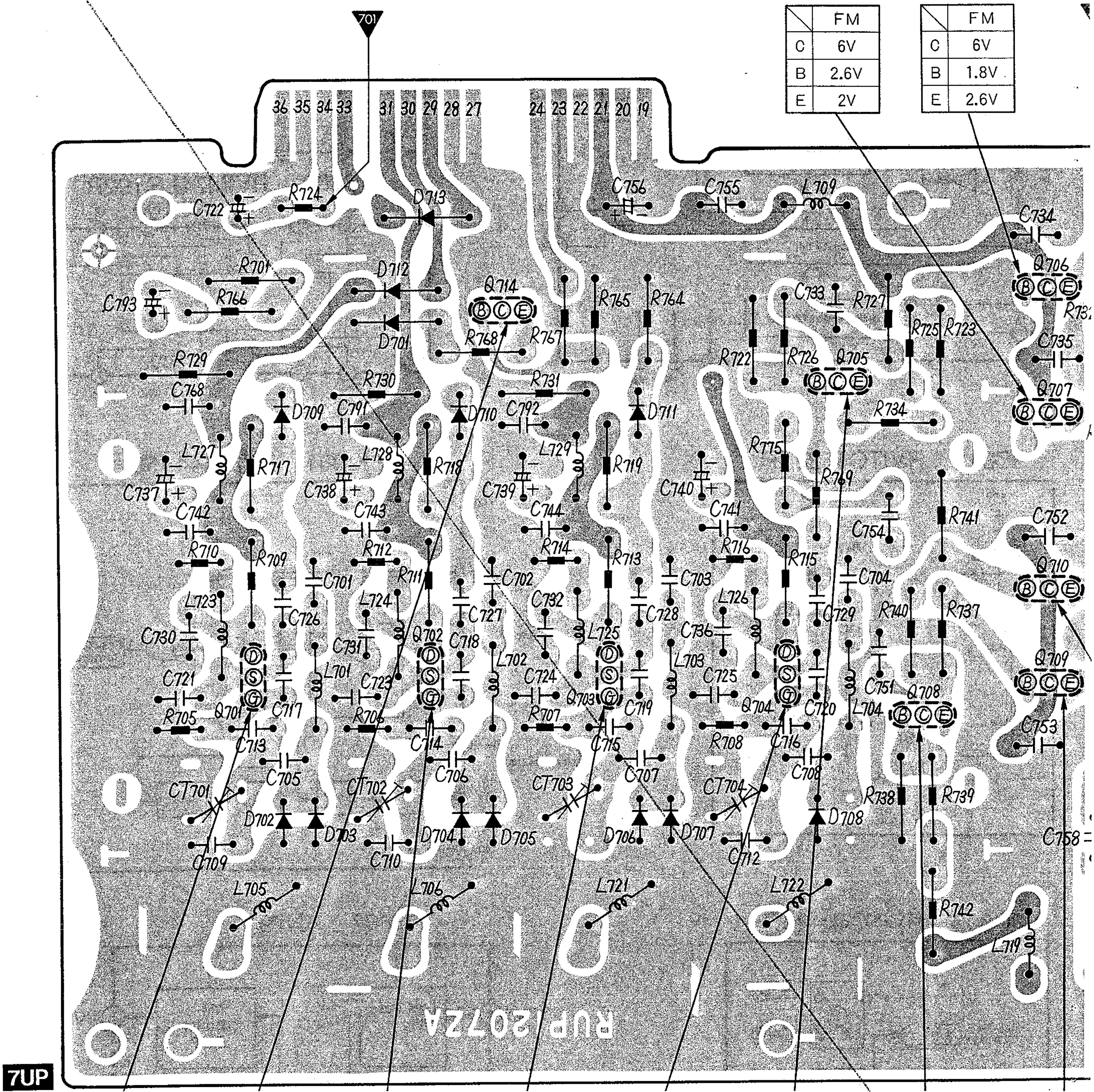
CIRCUIT BOARD WIRING VIEW (7 UP)

Q707

	FM
C	6V
B	2.6V
E	2V

Q706

	FM
C	6V
B	1.8V
E	2.6V


701
36 35 34 33 31 30 29 28 27 24 23 22 21 20 19
C722
R724
D713
C756
C755
L709
C734
Q706
R701
R766
C793
D712
D701
Q714
R768
R767
R765
R764
C733
R727
R725
R723
R722
R726
Q705
C735
Q707
R729
C768
R730
R731
D709
C791
D710
C792
D711
R734
L727
R717
L728
R718
L729
R719
C737
C738
C739
C740
R775
R769
C742
C743
C744
C741
C754
R741
C752
R710
R709
R712
R711
C701
R714
R713
C702
C703
R716
R715
C704
Q710
L723
C726
L724
C727
C732
L725
C728
L726
C736
C729
R740
R737
C730
C731
Q702
C718
C721
L701
C723
L702
C724
L703
C725
C751
Q708
Q709
R705
Q701
C717
R706
C714
R707
Q703
C719
C715
Q704
C720
C716
L704
C753
C713
C705
C706
C707
R708
C708
R738
R739
CT701
CT702
CT703
CT704
D702
D703
D704
D705
D706
D707
D708
C758
C709
C710
C712
L705
L706
L721
L722
R742
L719
RUP1207ZA
7UP

Q701

	SW2,3
D	4.6V
G	0V
S	0.4V

Q714

C	0V
B	0.5V
E	0V

Q702

	SW4
D	5.4V
G	0V
S	0.4V

Q703

	SW5
D	5.3V
G	0V
S	0.4V

Q704

	FM
D	5.5V
G	0V
S	0.5V

Q705

	FM
C	5.6V
B	3.5V
E	2.7V

Q708

	SW2~5
C	5.4V
B	3.3V
E	2.6V

Q70

	SW2
C	5.4
B	2.6
E	1.8

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1. PARTICUARITÉS

[Section radio]

- Récepteur mondial en *FM/GO/PO/OC*, *équipé d'un synthétiseur à asservissement de phase* (PLL).
- Syntonisation à accès direct.
  Ce dispositif permet la réception instantanée d'une station par simple pression d'une touche.
- Accord préréglé de 15 stations émettrices.
- Accord direct par 22 touches à effleurement.
- Sélecteur de largeur de bande AM à 3 positions.
- Exploitation en BLU *inférieure*, BLU *supérieure* et CW (*signal à onde entretenue*).
- Sélecteur d'incrément de fréquence AM.
- Indicateur d'accord FM à zéro central, d'intensité du signal et de vérification des piles.
- Commandes séparées pour les tonalités graves et aiguës.
- Commande de gain RF.
- *Limiteur automatique* de bruit (ANL).
- Correcteur physiologique.
- Commutateur de mise en marche/arrêt du tweeter.
- Sélecteur de vitesse de syntonisation. (lente ou rapide)
- Indication de fréquence par 30 diodes électroluminescentes (LED).

2. FICHE TECHNIQUE

Section GO/PO/OC (1,6110~2,9009 MHz)

Plage de fréquence:	GO 150~420 kHz (2000~714,3 m) PO 520,0~1610,9 kHz (576,9~186,2 m) OC 1,6110~2,9009 MHz (186,2~103,4 m)
Type:	Superhétérodyne simple avec synthétiseur à verrouillage de phase
Fréquence inter-médiaire:	455 kHz
Sensibilité:	S/N 6 dB GO 1 μV PO 1 μV OC 1 μV (Modulation 400 Hz, 30% pour 50 mW)
Sélectivité:	WIDE (large) ±2,4 kHz (−6 dB) ±5 kHz (−60 dB) MED (medium) ±1,6 kHz (−6 dB) ±3,2 kHz (−60 dB) NARROW (étroite) ±1,2 kHz (−6 dB) ±2,3 kHz (−60 dB)
Taux d'interférence d'image:	GO 120 dB (à 280 kHz) PO 80 dB (à 1000 kHz) OC 60 dB (à 2,3 MHz)
Commande de gain RF:	−40 dB

Section OC (2,9010~30,0000 MHz)

Plage de fréquence:	2,9010~30,0000 MHz (103,4~10 m)
Type:	Superhétérodyne double avec synthétiseur à verrouillage de phase

[Section Horlogerie]

- Minuterie programmable sur 7 jours
  La fonction de programmation rend possible le réglage de n'importe quelle fréquence (FM, GO, PO ou OC) que l'on désire recevoir, et ceci à n'importe quel moment.
- Horloge à quartz, dont l'affichage à cristaux liquides (LCD) indique le mois, la date et le jour de la semaine.
  Elle est dotée de circuits de micro-ordinateur dont la fiabilité du fonctionnement est garantie.
- Dispositif d'alimentation d'appoint pour l'horloge et la mémoire.
- Touche d'affichage horaire secondaire
- Sélecteur d'affichage en cycle 12/24 heures
- Commutateur marche/arrêt de top horaire

Fréquence inter-médiaire:	1ère FI 46,125 MHz 2ème FI 455 kHz
Sensibilité:	OC 0,5~1 μV (S/N 6 dB) SSB 0,2 μV (S/N 6 dB) (Modulation 400 Hz, 30% pour 50 mW)
Sélectivité:	WIDE (large) ±2,4 kHz (−6 dB) ±5 kHz (−60 dB) MED (medium) ±1,6 kHz (−6 dB) ±3,2 kHz (−60 dB) NARROW (étroite) ±1,2 kHz (−6 dB) ±2,3 kHz (−60 dB)
Taux d'interférence d'image:	1ère 100 dB 2ème 70 dB

Section FM

Plage de fréquence:	87,5~108 MHz
Type:	Superhétérodyne simple avec synthétiseur à verrouillage de phase
Fréquence inter-médiaire:	10,7 MHz
Sensibilité:	1,5 μV/75Ω (−3 dB Seuil de sensibilité) 2 μV/75Ω (S/N 26 dB)
Sélectivité deux signaux:	70 dB (±400 kHz)
Taux d'interférence d'image:	60 dB (à 98 MHz)

Affichage de fréquences

Affichage:	Par cristaux liquides (LCD)
Exactitude:	*Lecture directe à 100 Hz près pour émissions BLU/CW/AM* Lecture directe à 10 kHz près pour FM
Nombre de chiffres affichés:	6
Stabilité de fréquence:	A 100 Hz près pendant 60 minutes après *temps de réchauffement*

Mécanisme de syntonisation

Incrément de fréquence:

	Rapide	Lente
BLU/CW	500 Hz	100 Hz
AM	100 Hz/500 Hz	100 Hz
	1 kHz/5 kHz	1 kHz
FM	50 kHz	10 kHz

Taux de vitesse d'accord: Rapide:Lente=5:1

Mémoire de préréglage

Nombre de stations préréglables: 15 stations

Horloge/minuterie/calendrier

Type:	Horloge à quartz à affichage par cristaux liquides (LCD)/Minuterie programmable sur 7 jours.
Fonctions:	Heure réelle (Heures, minutes, secondes) Calendrier (Mois, date, jour) Temps double Top horaire sur l'heure Réglage en cycle 12/24 heures Décompte minuté (Sleep) Commande de mise hors service de minuterie à CC. 6 modes de réception automatique ① Opération hebdomadaire répétée quotidiennement ② Opération hebdomadaire répétée une fois par semaine ③ Opération hebdomadaire répétée tous les jours sauf un ④ Opération hebdomadaire répétée deux fois par semaine ⑤ Opération hebdomadaire répétée tous les jours sauf deux ⑥ Opération unique, un jour de la semaine seulement On pourra programmer dans la mémoire 4 des 6 types de programmes présentés ci-dessus.
Précision:	Ecart mensuel ±15 secondes (Température 16°C, Humidité, 50%)

Données générales

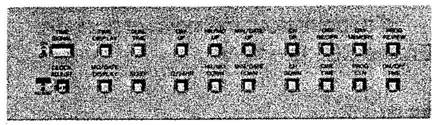
Semiconducteurs:	Circuits intégrés 41 Transistors 174 Transistors FET 21
Puissance de sortie:	CC max. 7 W (60%, MOD. 400 Hz) 10 W (CA, MPO)
Haut-parleur:	*Système à 2 voies* Type ovale 18×12 cm (4Ω) 6,5 cm (4Ω)
Alimentation électrique:	CA 100~110/115~127/200~220/230~250 V, 50/60 Hz CC 18 V (12×UM-1, taille "D") 3 V (2×UM-3, "AA") . . . *Alimentation d'appoint pour mémoire et horloge.* Entrée CC: 12~18 V
Consommation:	35 W
Prises jacks:	Sortie écouteur (3,5∅) Sortie casque (6∅) Sortie enregist. (3,5∅, 8 kΩ) Sortie enregist. (DIN, 80 kΩ) Entrée AUX. (3,5∅, 570 kΩ) Entrée AUX. (DIN, 570 kΩ) Sortie MPX. (3,5∅, 5 kΩ) Sortie haut-parleur indépendant (3,5∅, 4~8Ω) Sortie haut-parleur indépendant (DIN, 4~8Ω) Entrée CA Entrée CC Sortie minuterie CC
Antenne:	FM Antenne fouet 100 cm Ant. ext. (une touche, 75Ω) Ant. ext. (DIN, 300Ω) GO Antenne à âme de ferrite 12∅×200 mm PO/OC (1,6110~2,9009 MHz) Antenne à âme de ferrite 12∅×200 mm OC (2,9010~30,0000 MHz) Antenne fouet 150 cm GO/PO/OC Ant. ext. (une touche, 75Ω) Ant. ext. (DIN, 75Ω)
Dimensions: (L×H×P)	520×362×206 mm (20-1/2×14-1/4×8-1/8")
Poids:	20,3 kg (44 lb. 14, 1 oz) sans les piles

Specifications présentées se reservent de changements sans prévis.

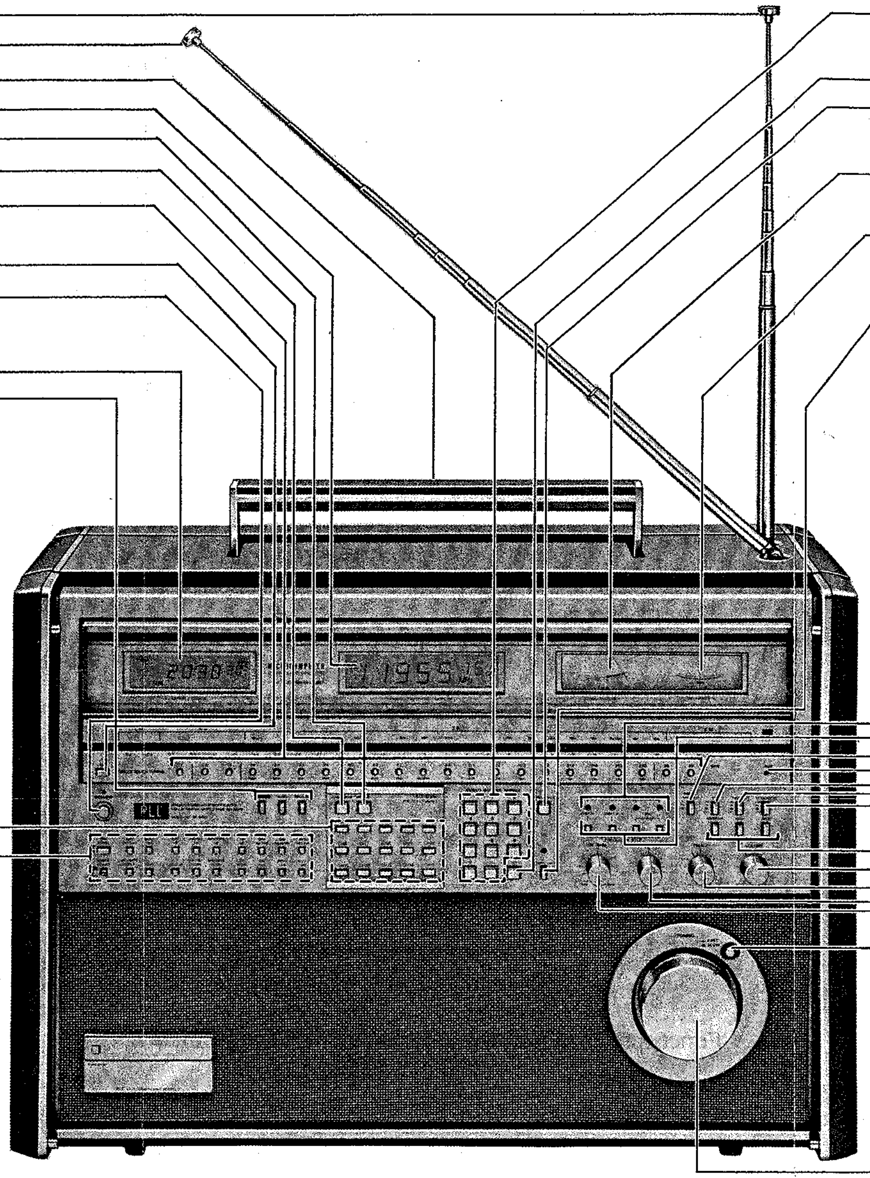
3. LOCATION OF CONTROLS

- ① SW Telescopic Antenna
- ② FM Telescopic Antenna
- ③ Handle
- ④ Frequency Display
- ⑤ Memory Key (MEMORY)
- ⑥ Scan/Stop Key (SCAN/STOP)
- ⑦ Direct Touch Tuning Keys (DIRECT TOUCH TUNING)
- ⑧ Light Button (LIGHT)
- ⑨ Power Switch (POWER)
- ⑩ Preset Tuning Keys (CH1~CH15)
- ㉛ Clock/Timer/Calender Display
- ㉜ Program Mode Selector (SELECTOR)

Clock/Timer/Calender Controls

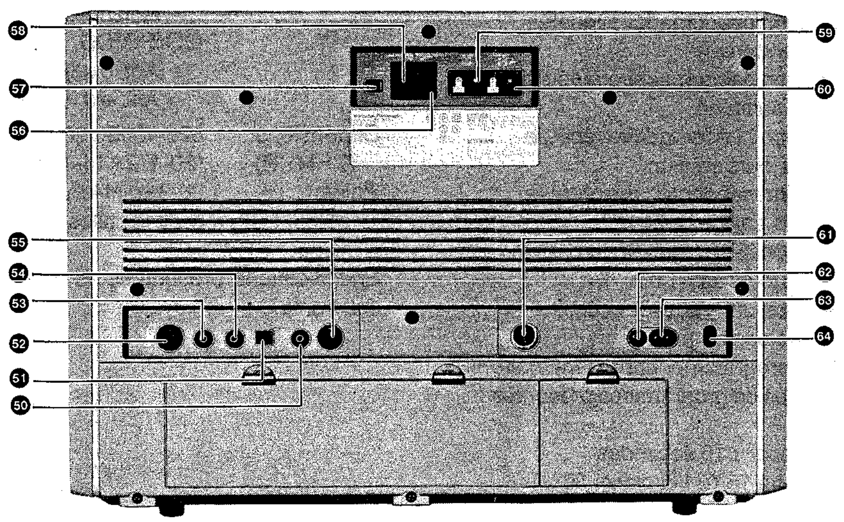


- ㉝ Time Signal On/Off Switch (TIME SIGNAL)
- ㉞ Clock Adjust Switch (CLOCK ADJUST)
- ㉟ Time Display Key (TIME DISPLAY)
- ㊱ Month/Date Display Key (MO./DATE)
- ㊲ Dual Time Display Key (DUAL TIME)
- ㊳ Sleep Set Key (SLEEP)
- ㊴ Day Up Key (DAY UP)
- ㊵ 12/24 HR. Display Selector Key (12/24 HR.)
- ㊶ Hour/Month Up, Down Keys (HR./MO. UP, DOWN)
- ㊷ Minute/Date Up, Down Keys (MIN./DATE UP, DOWN)
- ㊸ Channel Up, Down Keys (CH UP, DOWN)
- ㊹ Day Reciprocal Key (DAY RECIPR.)
- ㊺ One Time Key (ONE TIME)
- ㊻ Day Memory Key (DAY MEMORY)
- ㊼ Program Clear Key (PROG. CLR.)
- ㊽ Program Review Key (PROG. REVIEW)
- ㊾ On/Off Time Set Key (ON/OFF TIME)



- ⑪ Direct-Access Tuning Keys (DIRECT-ACCESS TUNING)
- ⑫ Tuning Set Key (SET)
- ⑬ Frequency Setting Key (FREQUENCY)
- ⑭ Signal/Battery Meter (SIGNAL/BATTERY)
- ⑮ FM Center Tuning Meter (FM TUNING)
- ⑯ Tuning Lock Button (TUNING LOCK)
- ⑰ AM Mode Indicator (AM MODE)
- ⑱ AM Mode Selector (AM Frequency Step Selector) (FREQUENCY STEP)
- ⑲ Meter Selector (SIGNAL/BATTERY)
- ⑳ Aux. Indicator (AUX.)
- ㉑ ANL Switch (ANL)
- ㉒ Tweeter On/Off Switch (TWEETER)
- ㉓ Loudness Switch (LOUDNESS)
- ㉔ AM Band Width Selector (AM BAND SELECTOR)
- ㉕ Volume Control (VOLUME)
- ㉖ Treble Control (TREBLE)
- ㉗ Bass Control (BASS)
- ㉘ RF Gain Control (RF GAIN)
- ㉙ Tuning Speed Selector (FAST/SLOW)
- ㉚ Manual Tuning Control

Fig. 1-1



- ㊿ External Speaker Jack (EXT SP)
- (51) AUX/RADIO Switch (AUX/RADIO)
- (52) AUX/REC Jack (AUX/REC)
- (53) AUX Jack (AUX)
- (54) MPX OUT Jack (MPX OUT)
- (55) External Speaker DIN (EXT SP)
- (56) AM Antenna DIN (AM ANT)
- (57) Antenna Selector Switch (INT ANT/EXT ANT)
- (58) FM Antenna DIN (FM ANT)
- (59) FM Antenna Terminal (FM ANT)
- (60) AM Antenna Terminal (AM ANT)
- (61) Timer Out Jack (TIMER OUT)
- (62) DC IN Jack (DC IN 12~18 V)
- (63) AC IN Jack (AC IN)
- (64) Voltage Selector Switch (VOLTAGE SELECTOR)

Fig. 1-2

4. CONTROLS AND THEIR FUNCTIONS

Radio section:

① SW Telescopic Antenna
Used for receiving short-wave broadcasts.

② FM Telescopic Antenna
Used for receiving FM broadcasts.

③ Handle

④ Frequency Display
Indicates the frequency of the LW, MW, SW or FM broadcasting station received.

⑤ Memory Key (MEMORY)
Depress this key to preset the tuned frequency into one of the preset tuning channels (CH1~CH15).
(For details, refer to "Preset tuning.")

⑥ Scan/Stop Key (SCAN/STOP)
When this key is depressed, scanning is performed from CH1→CH2 . . . CH15→CH1→CH2—and the frequency of each of the channels is indicated simultaneously on the frequency display. Scanning stops when this key is depressed again at the desired channel.

⑦ Direct Touch Tuning Keys (DIRECT TOUCH TUNING)
There are 1 LW key, 2 MW keys, 17 SW keys and 2 FM keys. Tuning is facilitated by depressing the key in the desired band or a key closest to the desired broadcasting station.
With SW broadcasts, the center frequency of each meter band is tuned. By using the direct touch keys in combination with the tuning control, manual tuning can be performed speedily.

⑧ Light Switch (LIGHT)
When this switch is depressed (■–■) and the Power switch⑨ is at ON, the clock/calendar display, frequency display and meters are all illuminated.

⑨ Power Switch, Power Indicator (POWER)
When this switch is depressed, the power comes on and it goes off when depress again.

5.DISASSEMBLY INSTRUCTIONS

5-1. ■ Rear Cabinet, Telescopic Antenna & Chassis

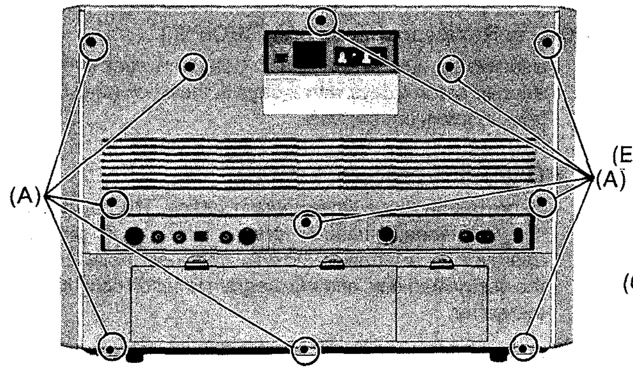


Fig. 2

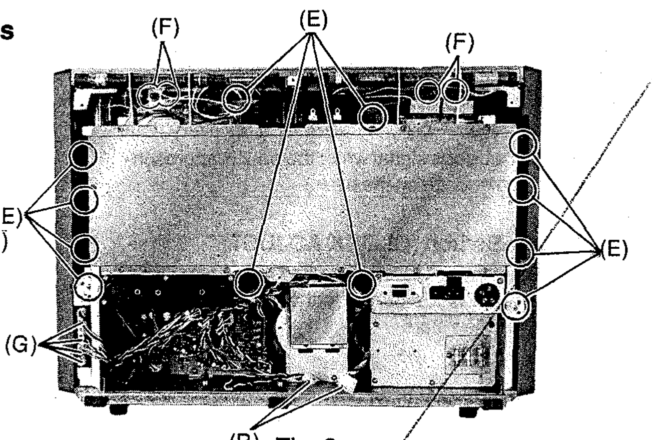


Fig. 3

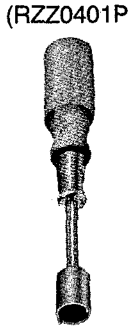


Fig. 4

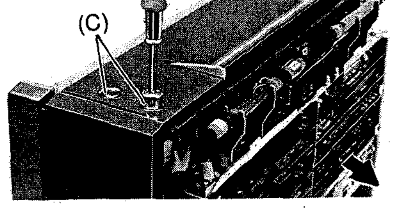


Fig. 4-1

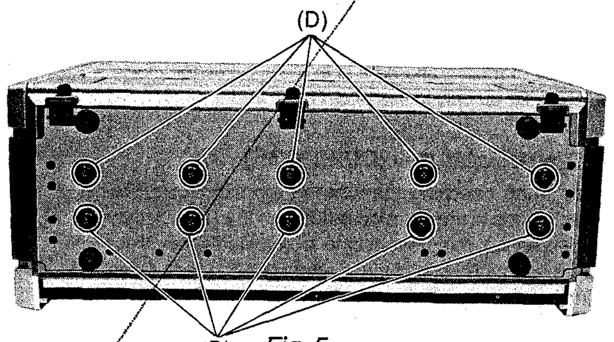


Fig. 5

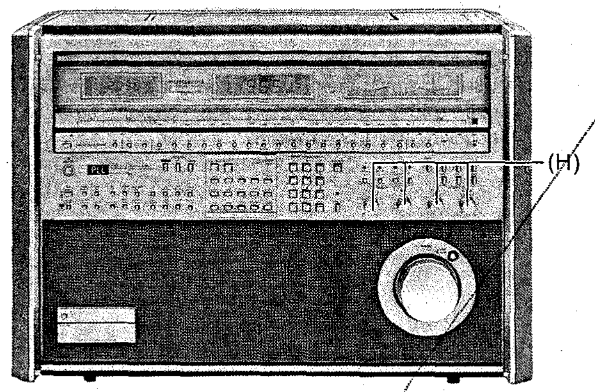


Fig. 6

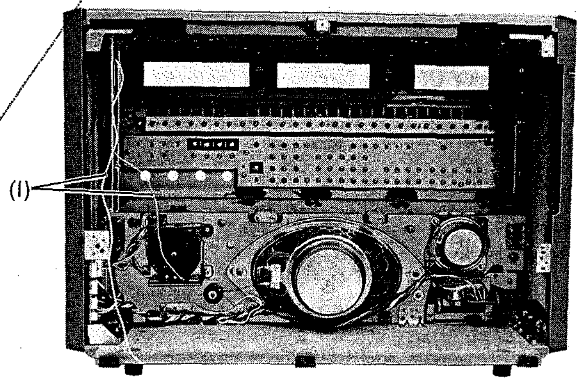
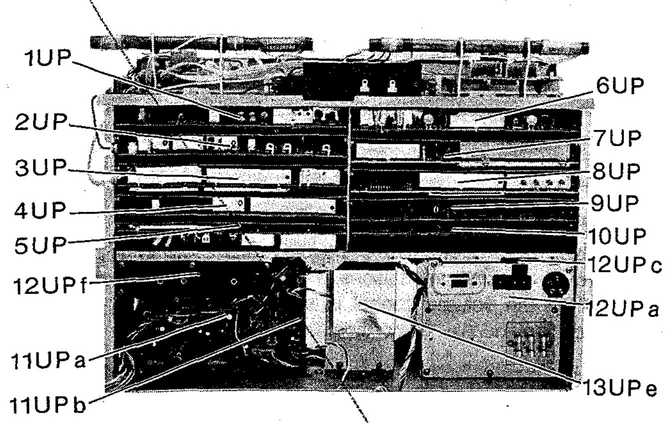


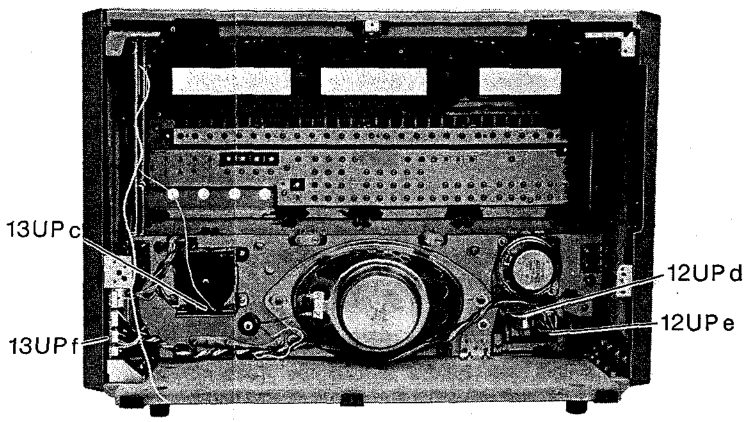
Fig. 7

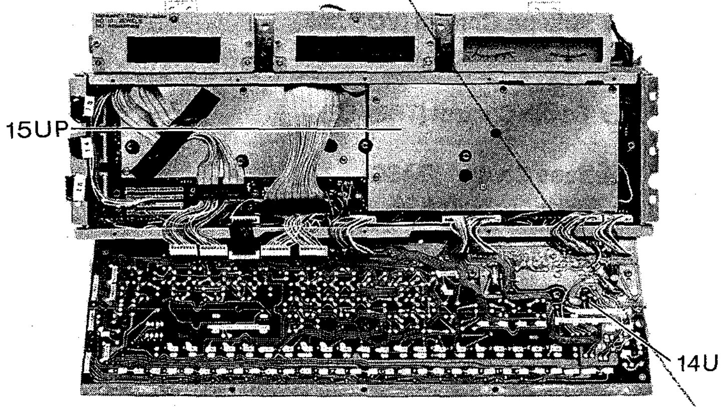
Procedure	To remove—.	Remove—.	Shown in Fig—.
1	Rear Cabinet	Screw (3×8) .... (A)×11	2
2		Socket (CN46, 47) .... (B)×2	3
3	Telescopic Antenna (*1)	Holder .... (C)×2	4, 4-1
4	Chassis (*2)	Screw (4×25) .... (D)×10	5
5		Red Screw (3×8) .... (E)×12	3
6		Red Screw (4×12) .... (F)×4	3
7		Extend the antenna.	
8		Lower the handle	
9		Socket (CN42~45) .... (G)×4	3
10		Knob .... (H)×4	6
11		Remove the chassis in the direction of arrow.	4-1
12		Antenna Socket .... (I)×2	7

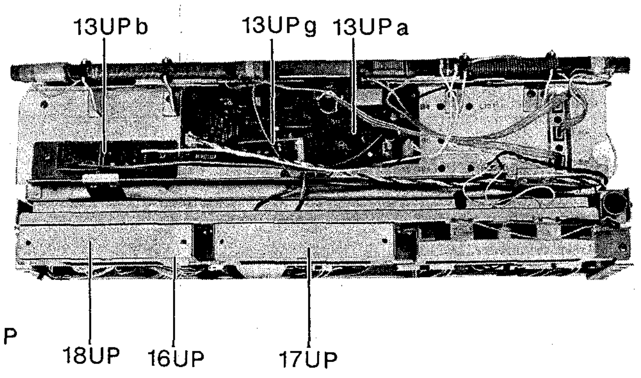
*1. Using the repair tool (RZZ0401P) shown in Fig. 4, remove the antenna holder.
*2. When putting the chassis in a box, check the position of the antenna and the handle.

5-2. ■ Location of Printed Circuit Board


1UP
2UP
3UP
4UP
5UP
12UPf
11UPa
11UPb
6UP
7UP
8UP
9UP
10UP
12UPc
12UPa
13UPe


13UPc
13UPf
12UPd
12UPe




13UPb
13UPg
13UPa
18UP
16UP
17UP

PC Board	Main Circuitry
1 UP	LW, MW, SW1—RF
2 UP	FM RF IF DET, METER
3 UP	SW2~5 BPF, RF~IF
4 UP	LW, MW, SW1—VCO, Xtal OSC, MIX
5 UP	IF, DET, BPF, SSB, AM METER
6 UP	2nd PLL, VCO, MIX
7 UP	SW2~5, FM VCO, MIX, Muting
8 UP	1st, 2nd PLL, Control
9 UP	Radio Control-2
10 UP	Radio Control-1, μcom Block
11 UPa	AF AMP, Constant Voltage Power Supply
11 UPb	AF AMP, Constant Voltage Power Supply
12 UPa	Power Supply
12 UPb	Back up, Timer Out, Connector
12 UPc	EXT DC IN
12 UPd	Headphone
12 UPe	EP, Rec Out
12 UPf	AF Filter
13 UPa	Antenna
13 UPb	Antenna
13 UPc	Tuning
13 UPd	Tuning Speed Selector
13 UPe	DC-DC CONV
13 UPf	Connector
13 UPg	Whip BPF
14 UP	Key Board
15 UP	Common
16 UP	Clock
17 UP	Frequency Display
18 UP	Common

⑩ Preset Tuning Keys (CH1~CH15)

Used for preset tuning.

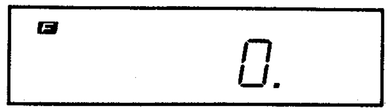
⑪ Direct-Access Tuning Keys (DIRECT-ACCESS TUNING)

⑫ Tuning Set Key (SET)

Depress this key after having tuned in the desired station with the Direct-Access Tuning keys.

⑬ Frequency Setting Key (FREQUENCY)

Depress this key before setting the frequency of a broadcasting station with a Direct-Access Tuning key. The indication on the frequency display is as below.



⑭ Signal/Battery Meter (SIGNAL/BATTERY)

Use the meter selector⑲ to check the signal strength or the battery strength.

⑮ FM Center Tuning Meter (FM TUNING)

The meter pointer indicates the center of the scale at the optimum tuning point.

⑯ Tuning Lock Button (TUNING LOCK)

Depress this button when locking a broadcasting station during reception. The tuning lock indicator (LED) lights and there is no change even when any of the radio controls are touched. (But the program is executed.)

⑰ AM Mode Indicators (AM MODE)

The LED corresponding to the actual mode lights.

⑱ AM Mode Selector (Frequency Step Selector) (FREQUENCY STEP)

An AM Mode and SSB is selected with the determined frequency step.

⑲ Signal/Battery Meter Selector (SIGNAL/BATTERY)

Selects the signal/battery meter: released position (▄→█) for the signal strength and depressed position (█→▄) for the battery level.

⑳ AUX Indicator (AUX)

This lights when the rear panel Radio/Aux selector has been set to the AUX.

㉑ ANL (Automatic Noise Limiter) Switch (ANL)

Used to reduce the level of automobile ignition noise and other pulse-like noise. If a great deal of noise makes the sound of a broadcasting station difficult to hear, set this switch to the "ON" (█→▄).

㉒ Tweeter Switch (TWEETER)

Sets the tweeter on and off. Set to "OFF (▄→█)" when there is a great deal of noise in the high-frequency range with SW broadcast reception and to "ON (█→▄)" when you want to listen to the hi-fi sound of an FM broadcast.

㉓ Loudness Switch (LOUDNESS)

Used when emphasizing the bass and treble under low volume listening conditions. This switch is effective only when the volume control is set between the left most position and the "5" position.

㉔ AM Band Width Selector (AM BAND WIDTH)

Set to "MED" or "NARROW" when there is a great deal of interference during LW, MW or SW reception. Normally, it is set to the WIDE.

㉕ Volume Control (VOLUME)

Used to adjust the volume.

㉖ Treble Control (TREBLE)

㉗ Bass Control (BASS)

These two controls are used to adjust the sound quality.

㉘ RF Gain Control (RF GAIN)

Used when receiving an LW, MW or SW broadcast. Normally, it is set to the MAX. However, when the signals are too strong and the sound is distorted or when there is interference, rotate the control in the direction of MIN and set to the position which yields the best reception.

㉙ Fast/Slow Tuning Speed Selector (FAST/SLOW)

Makes tuning even more effective with frequency step selector.

㉚ Tuning Control

Used for manual tuning.

Clock/Timer/calendar section

㉛ Clock/Timer/Calendar Display

Indicates the present time, sleep time, program setting time and the calendar.

㉜ Program Mode Selector (SELECTOR)

MANUAL:	Manual mode regardless of program.
AUTO:	Depress this button after program setting. The program is then executed.
PROG. SET:	Set the program with this button depressed.

㉝ Time Signal Switch (TIME SIGNAL)

When set to "ON(█→▄)", the alarm sounds every hour on the hour. (Two beeps signal when the hour is approaching and one beep sounds on the hour.)

㉞ Clock Adjust Switch (CLOCK ADJUST)

Set to "ADJUST(▄→█)" when setting the present time. After setting, depress the button to the "LOCK(█→▄)" and the clock will then start.

㉟ Time Display Key (TIME DISPLAY)

Depress this key when setting the time and display the time on the clock/calendar display.

㊱ Month/Date Display Key (MO./DATE)

Depress when setting the month, date and day.
The display of month and date is exchanged on the clock/timer/calender display in the model for Europe.

㊲ Dual Time Display Key (DUAL TIME)

Depress when checking the time on the sub clock. The display changes to the sub clock and when the Time Display key is depressed, the present time is indicated again. If the display is left on the sub clock, a return will be made to the present time automatically after 7 or 8 seconds.

㊳ Sleep Set Key (SLEEP)

Depress when setting the sleep time. The "sleep" time is then indicated on the clock/timer/calendar display.

㊴ Day Up Key (DAY UP)

Used to set the day with a month, date and day setting or with a program setting.

㊵ 12/24 HR. Display Selector Key (12/24 HR.)

Every time this key is depressed, the display alternates between AM/PM 12 hours and 24 hours.

㊶ Hour/Month Up, Down Keys (HR./MO. UP, DOWN)

Used to adjust the hours and months.
For details, refer to the section on setting the present time and setting the day and date.

㊷ Minute/Date Up, Down Keys (MIN./DATE UP, DOWN)

Used to adjust the minutes and date.
For details, refer to the section on setting the present time and setting the day and date.

㊸ Channel Up, Down Keys (CH UP, DOWN)

Used for program setting. The set channel is displayed on the right of the program time display and so depress these keys until the desired channel is indicated.

㊹ Day Reciprocal Key (DAY RECIPR.)

Used when setting a program for 6 days in a week with 1 day skipped or for 4 days with 2 days in the week (they do not have to follow on) skipped.

㊺ One Time Key (ONE TIME)

Depress with a one time program setting. The day display "⟲" (repeat) mark is erased, the on/off program operation is performed once only at the designated time on the designated day, and the program is set off continuously thereafter.

㊻ Day Memory Key (DAY MEMORY)

Used with program setting to set two days and every day except two (they do not have to follow on). (Refer to the section on programming.)

㊼ Program Clear Key (PROG. CLR)

Used to clear a set program. When the program mode selector is set to "PROG. SET", the program review key is depressed and this key is depressed when the program to be erased is indicated on the display, the display will be erased and the program will be cleared.

㊽ Program Review Key (PROG. REVIEW)

Used to check a set program. When the program mode selector is set to "PROG. SET", the first program is displayed. When this key is depressed, the programs are indicated in order (2nd→3rd→4th→1st). When setting programs, depress this key and load the programs in order.

㊾ On/Off Time Set Key (ON/OFF TIME)

Used to select the program's on and off times. The key is used either when setting the program time or when checking the program time.

⑩ Preset Tuning Keys (CH1~CH15)

Used for preset tuning.

⑪ Direct-Access Tuning Keys (DIRECT-ACCESS TUNING)

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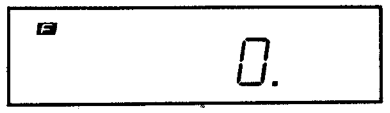

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Depress this button when locking a broadcasting station during reception. The tuning lock indicator (LED) lights and there is no change even when any of the radio controls are touched. (But the program is executed.)

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The LED corresponding to the actual mode lights.

⑱ AM Mode Selector (Frequency Step Selector) (FREQUENCY STEP)

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This lights when the rear panel Radio/Aux selector has been set to the AUX.

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Used to adjust the volume.

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These two controls are used to adjust the sound quality.

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Used when receiving an LW, MW or SW broadcast. Normally, it is set to the MAX. However, when the signals are too strong and the sound is distorted or when there is interference, rotate the control in the direction of MIN and set to the position which yields the best reception.

㉙ Fast/Slow Tuning Speed Selector (FAST/SLOW)

Makes tuning even more effective with frequency step selector.

㉚ Tuning Control

Used for manual tuning.

Clock/Timer/calendar section

㉛ Clock/Timer/Calendar Display

Indicates the present time, sleep time, program setting time and the calendar.

㉜ Program Mode Selector (SELECTOR)

MANUAL: Manual mode regardless of program.
AUTO: Depress this button after program setting. The program is then executed.
PROG. SET: Set the program with this button depressed.

㉝ Time Signal Switch (TIME SIGNAL)

When set to "ON(█—▄)", the alarm sounds every hour on the hour. (Two beeps signal when the hour is approaching and one beep sounds on the hour.)

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Depress when setting the month, date and day.
The display of month and date is exchanged on the clock/timer/calender display in the model for Europe.

㊲ Dual Time Display Key (DUAL TIME)

Depress when checking the time on the sub clock. The display changes to the sub clock and when the Time Display key is depressed, the present time is indicated again. If the display is left on the sub clock, a return will be made to the present time automatically after 7 or 8 seconds.

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Depress when setting the sleep time. The "sleep" time is then indicated on the clock/timer/calendar display.

㊴ Day Up Key (DAY UP)

Used to set the day with a month, date and day setting or with a program setting.

㊵ 12/24 HR. Display Selector Key (12/24 HR.)

Every time this key is depressed, the display alternates between AM/PM 12 hours and 24 hours.

㊶ Hour/Month Up, Down Keys (HR./MO. UP, DOWN)

Used to adjust the hours and months.
For details, refer to the section on setting the present time and setting the day and date.

㊷ Minute/Date Up, Down Keys (MIN./DATE UP, DOWN)

Used to adjust the minutes and date.
For details, refer to the section on setting the present time and setting the day and date.

㊸ Channel Up, Down Keys (CH UP, DOWN)

Used for program setting. The set channel is displayed on the right of the program time display and so depress these keys until the desired channel is indicated.

㊹ Day Reciprocal Key (DAY RECIPR.)

Used when setting a program for 6 days in a week with 1 day skipped or for 4 days with 2 days in the week (they do not have to follow on) skipped.

㊺ One Time Key (ONE TIME)

Depress with a one time program setting. The day display " ↻ " (repeat) mark is erased, the on/off program operation is performed once only at the designated time on the designated day, and the program is set off continuously thereafter.

㊻ Day Memory Key (DAY MEMORY)

Used with program setting to set two days and every day except two (they do not have to follow on). (Refer to the section on programming.)

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Used to select the program's on and off times. The key is used either when setting the program time or when checking the program time.

5.DISASSEMBLY INSTRUCTIONS

5-1. ■ Rear Cabinet, Telescopic Antenna & Chassis

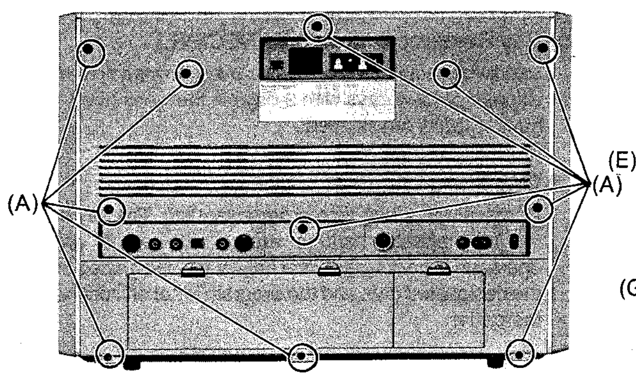


Fig. 2

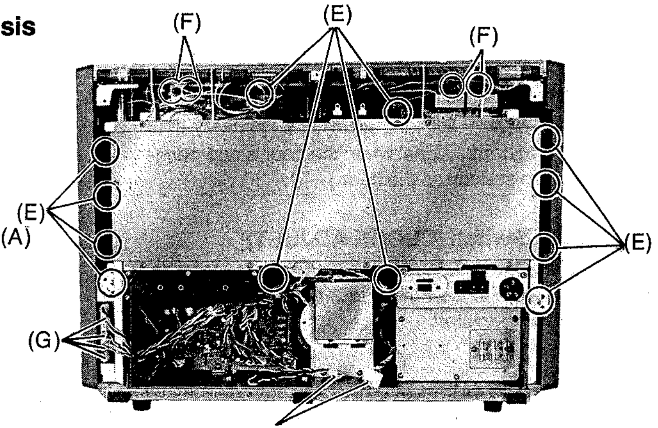


Fig. 3

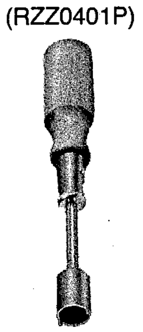


Fig. 4

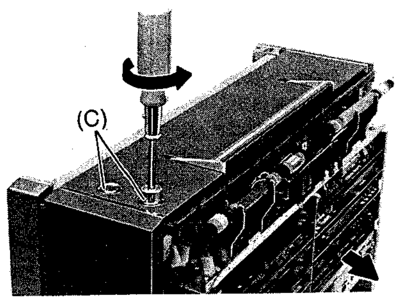


Fig. 4-1

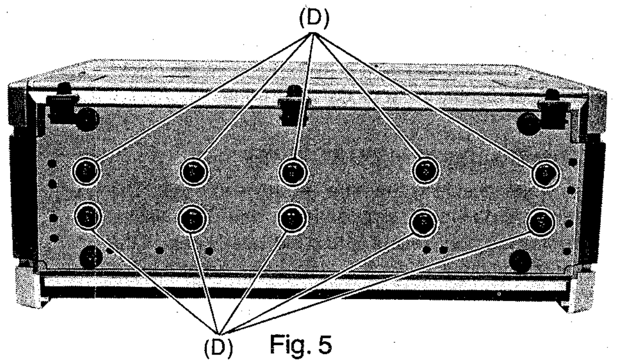


Fig. 5

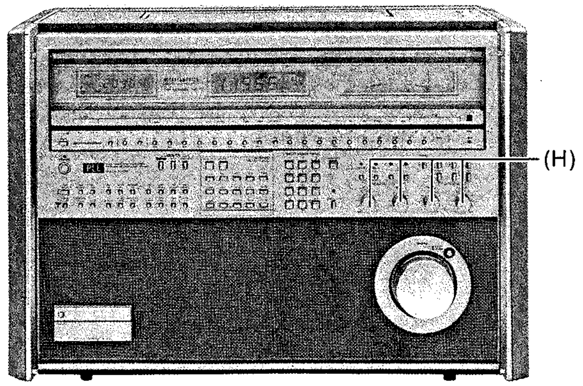


Fig. 6

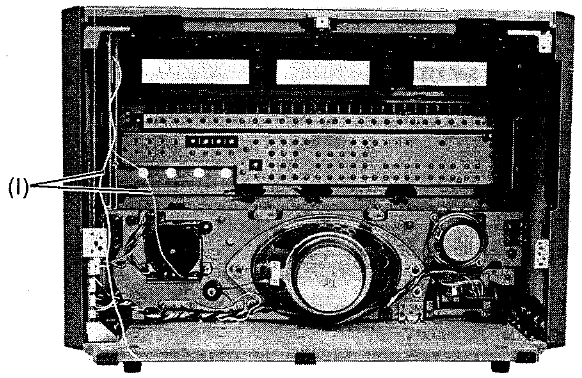
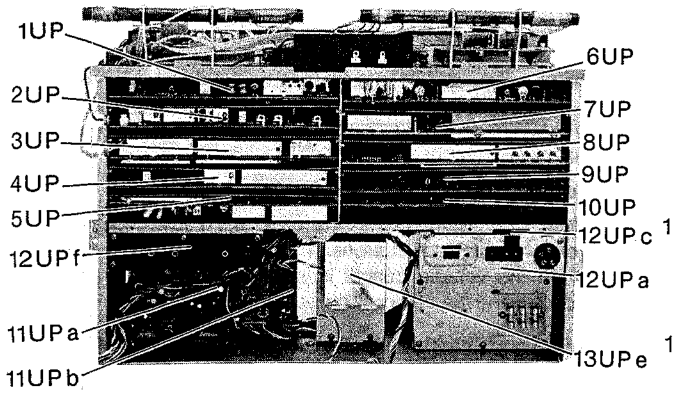


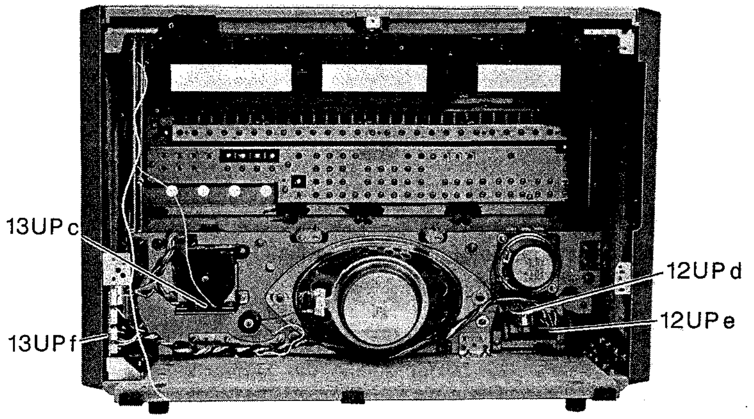
Fig. 7

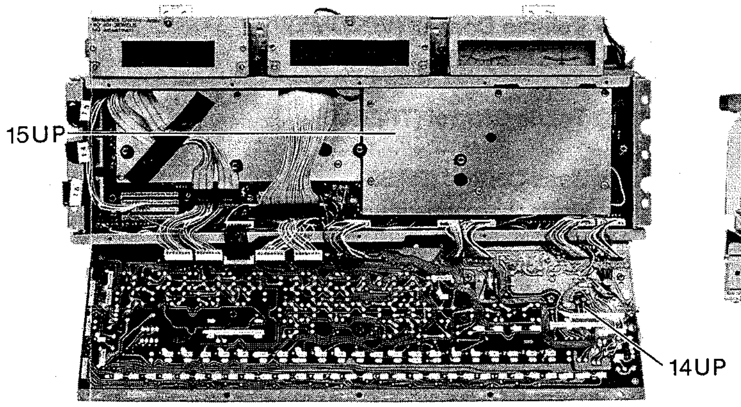
Procedure	To remove—.	Remove—.	Shown in Fig—.
1	Rear Cabinet	Screw (3×8) .... (A)×11	2
2		Socket (CN46, 47) .... (B)×2	3
3	Telescopic Antenna (*1)	Holder .... (C)×2	4, 4-1
4	Chassis (*2)	Screw (4×25) .... (D)×10	5
5		Red Screw (3×8) .... (E)×12	3
6		Red Screw (4×12) .... (F)×4	3
7		Extend the antenna.	
8		Lower the handle	
9		Socket (CN42~45) .... (G)×4	3
10		Knob .... (H)×4	6
11		Remove the chassis in the direction of arrow.	4-1
12		Antenna Socket .... (I)×2	7

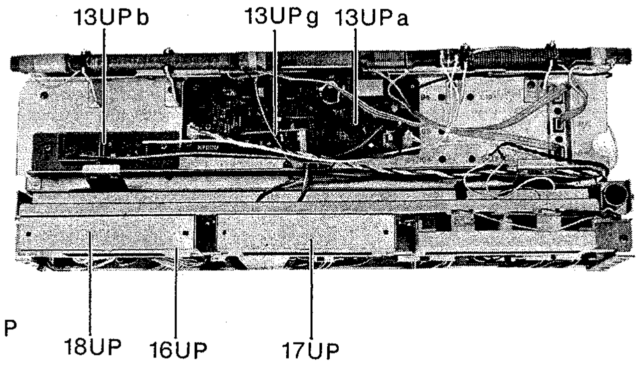
*1. Using the repair tool (RZZ0401P) shown in Fig. 4, remove the antenna holder.
*2. When putting the chassis in a box, check the position of the antenna and the handle.

5-2. ■ Location of Printed Circuit Board


1UP
2UP
3UP
4UP
5UP
12UPf
11UPa
11UPb
6UP
7UP
8UP
9UP
10UP
12UPc
12UPa
13UPe


13UPc
13UPf
12UPd
12UPe




13UPb
13UPg
13UPa
18UP
16UP
17UP

PC Board	Main Circuitry
1 UP	LW, MW, SW1—RF
2 UP	FM RF IF DET, METER
3 UP	SW2~5 BPF, RF~IF
4 UP	LW, MW, SW1—VCO, Xtal OSC, MIX
5 UP	IF, DET, BPF, SSB, AM METER
6 UP	2nd PLL, VCO, MIX
7 UP	SW2~5, FM VCO, MIX, Muting
8 UP	1st, 2nd PLL, Control
9 UP	Radio Control-2
10 UP	Radio Control-1, μcom Block
11 UPa	AF AMP, Constant Voltage Power Supply
11 UPb	AF AMP, Constant Voltage Power Supply
12 UPa	Power Supply
12 UPb	Back up, Timer Out, Connector
12 UPc	EXT DC IN
12 UPd	Headphone
12 UPe	EP, Rec Out
12 UPf	AF Filter
13 UPa	Antenna
13 UPb	Antenna
13 UPc	Tuning
13 UPd	Tuning Speed Selector
13 UPe	DC-DC CONV
13 UPf	Connector
13 UPg	Whip BPF
14 UP	Key Board
15 UP	Common
16 UP	Clock
17 UP	Frequency Display
18 UP	Common

5-6 ■ Key Board (14 UP)

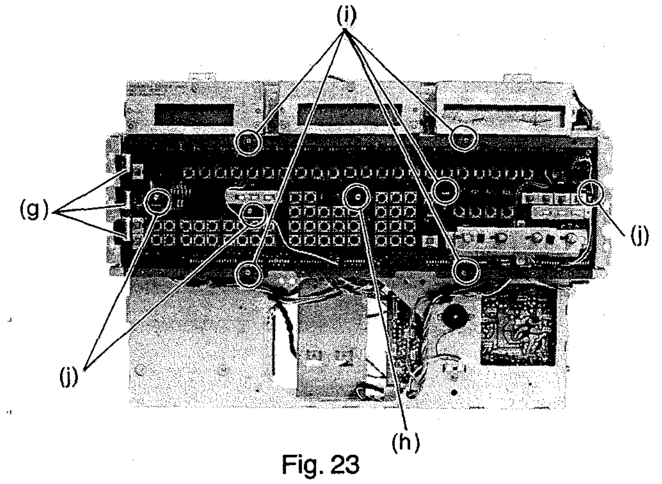


Fig. 23

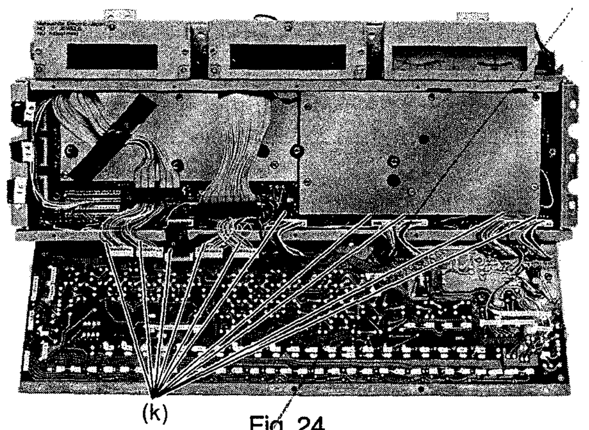


Fig. 24

38	Key Board (14 UP)	Stay Shaft .... (e)×1	21
39		Screw (3×6) .... (f)×6	21
40		Socket (CN13~15) .... (g)×3	23
41		Stay Shaft .... (h)×1	23
42		Screw (3×6) .... (i)×5	23
43		Screw (3×6) .... (j)×3	23
44		Socket .... (k)×10	24

5-7. ■ Common Board (15 UP)

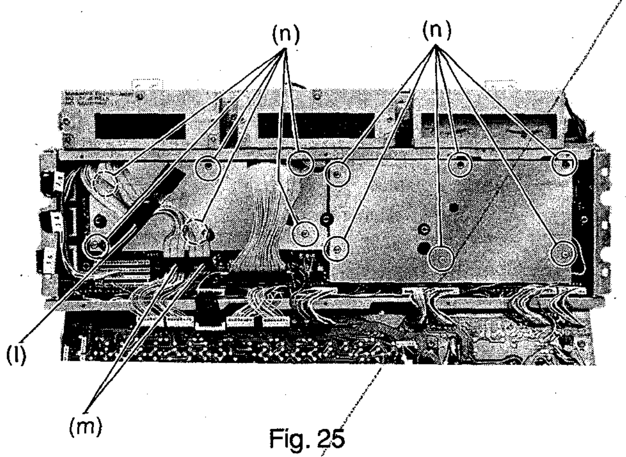


Fig. 25

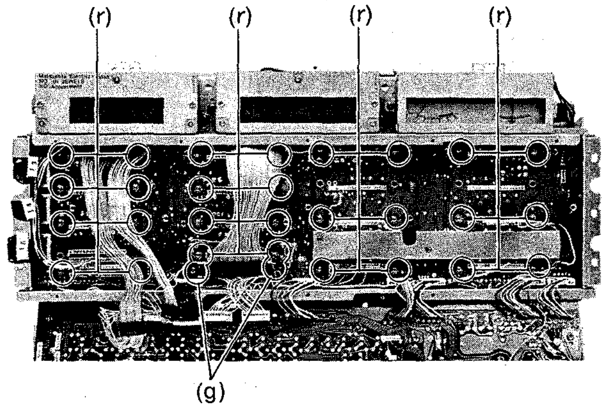


Fig. 26

45	Common Board (15 UP) *6	Tape .... (l)×1	25
46		Socket (CS100, 101) .... (m)×2	25
47		Screw (3×4) .... (n)×12	25
48		Remove the circuit board 1~10 UP, in the same way of 22~28.	—
49		Screw (3×12) .... (g)×2	26
50		Screw (2.6×12) .... (r)×28	26

*6. To remove the 15 UP completely, remove or loosen the socket and lead wire projecting from the 15 UP.

5-8. ■ Tuning Block (13 UPc) & Headphone (12 UPd), EP, Rec Out (12 UPe) Jack Board

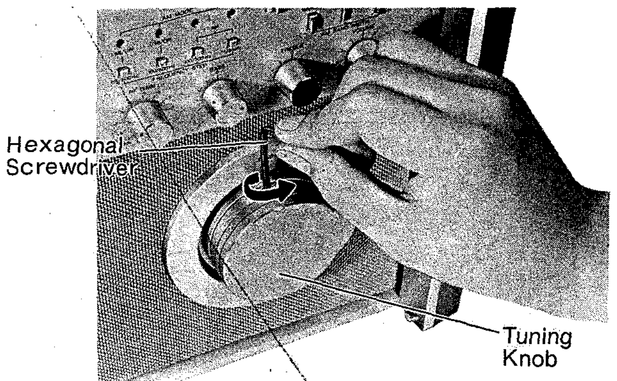


Fig. 27

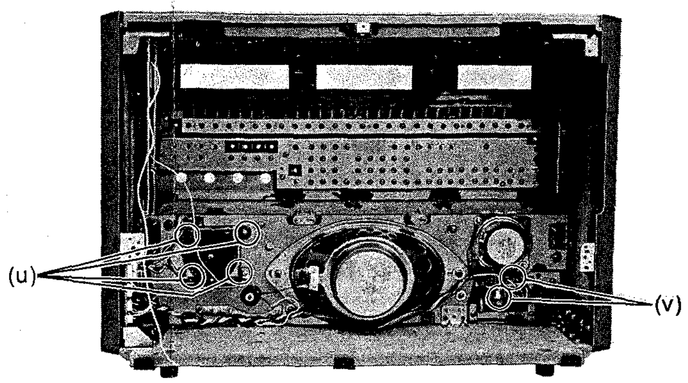


Fig. 28

51	Tuning Knob & Tuning Block (13 UPc)	Tuning Knob Screw (4×5) .... 🅣×2	27, 29
52		Tuning Knob	27
53		Screw (3×12) .... (u)×4	28
54	Headphone (12 UPd), EP, Rec Out (12 UPe) Jack Board	Screw (3×10) .... (v)×2	28

5-9. ■ Button, Handle, Handle Mechanism Block, Jack Cover, Front Panel & Indicating Plate

55	Button (w)	Screw (3×10) .... 🅧×10	29, 30
56	Button (y)	Screw (2.3×10) .... 🅐 ×5	29, 30
57	Handle	Screw (3×16) .... 🅑 ×6	29
58		Screw (3×6) .... 🅒 ×1	29
59		Spring & Stopper .... 🅓, 🅔 ×1	29
60		Screw (3×8) .... 🅕 ×2	29
61	Handle Mechanism, Block *7.	Screw (3×12) .... 🅖 ×2	29
62	Front Panel Jack Cover	Screw (3×8) .... 🅗 ×1	31
63		Screw (3×10) .... 🅘 ×2	31
64		Bracket .... 🅙 ×2	31
65		Badge (* 8) .... 🅚 ×1	31
66		Cover .... 🅛 ×1	31
67	Front Panel	Screw (3×16) .... 🅜 ×6	29
68	Indicating Plate	Screw (3×8) .... 🅝 ×5	29
69		Screw (2×8) .... 🅞 ×5	29

*7. When taking it apart refer to Fig. 29.

*8. Remove the National Panasonic badge by bending up the pins.

5-3. ■ Power Supply (12 UPa), EXT DC IN (12 UPc), DC-DC CONV (13 UPe), AF Filter (12 UPf) & AF AMP, Constant Voltage Power Supply (11 UPa, b) Circuit Boards

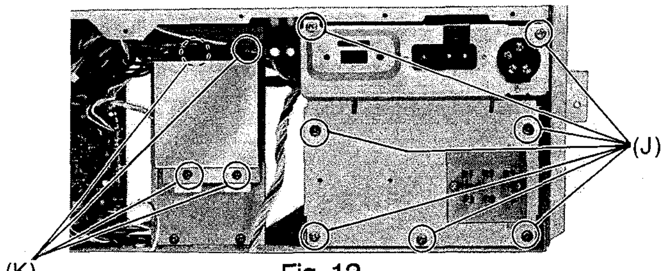


Fig. 12

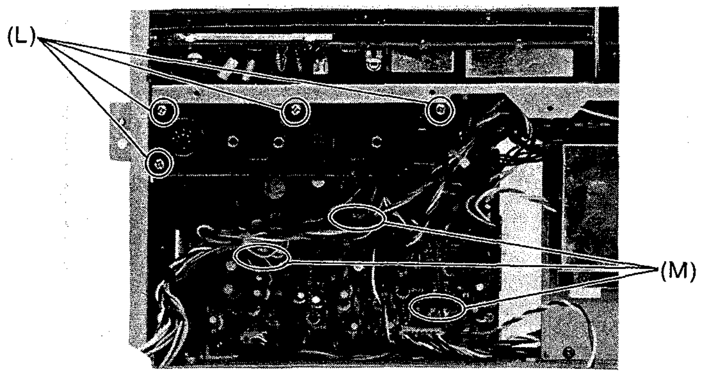


Fig. 13

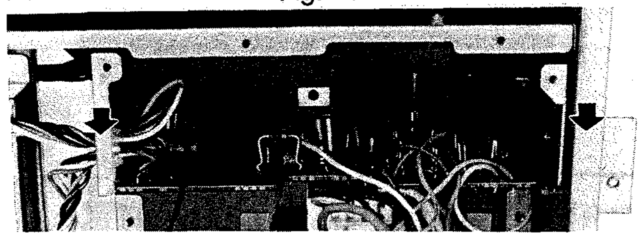


Fig. 14

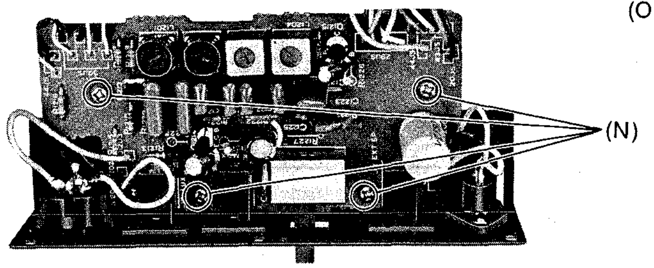


Fig. 15

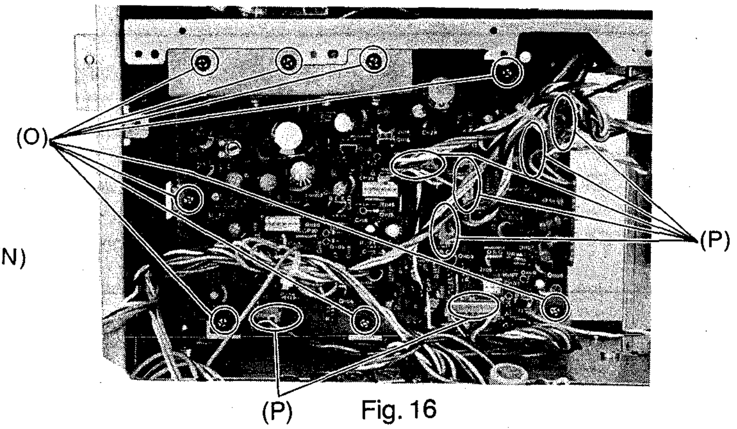


Fig. 16

13	Power Circuit Board	Screw (3×6) .... (J)×7	12
14	(12 UPa, 12 UPc)	Remove the circuit board in the direction of arrow.	14
15	DC-DC CONV (13 UPe)	Screw (3×6) .... (K)×4	12
16		Screw (3×6) .... (L)×4	13
17	AF Filter Circuit Board (12 UPf)	Socket (CN20, 29, 30) .... (M)×3	13
18		Screw (3×6) .... (N)×4	15
19	AF AMP, Constant Voltage Power	Screw (3×6) .... (O)×8	16
20	Supply Circuit Board (11 UPa, b)	Socket (CN21, 23~28) .... (P)×7	16

5-4. ■ 1 UP~10 UP

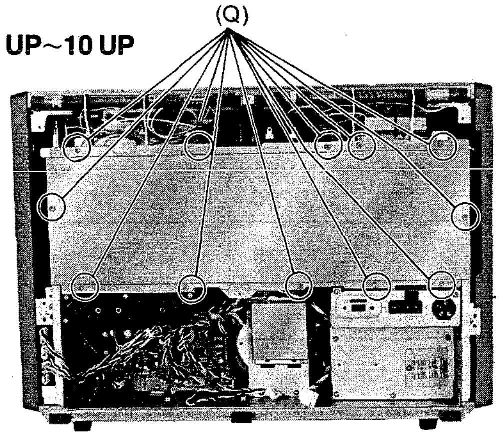


Fig. 17

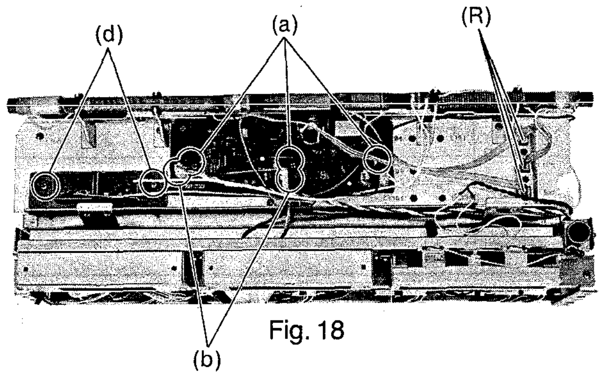


Fig. 18

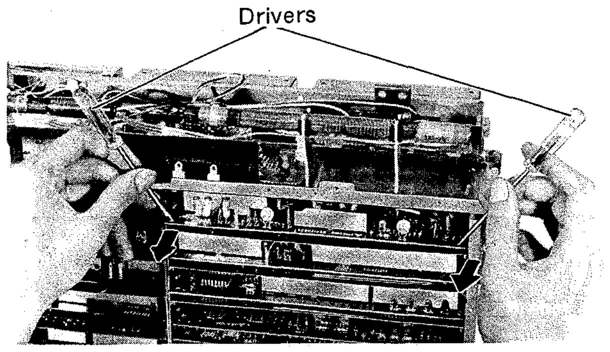


Fig. 19

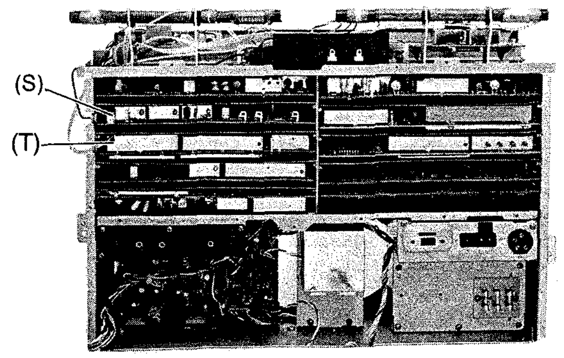


Fig. 20

21	Cover (1~10 UP)	Screw (3×6) .... (Q)×12	17
22		Socket (CN101, 102, 103) .... (R)×3	18
23	1 UP *3	Remove the circuit board with drivers in the direction of arrow.	19
24	2 UP *3	Remove in the same manner as no. 23.	19
25		Socket (CN4) .... (S)×1	20
26	3 UP *3	Remove in the same manner as no. 23.	19
27		Socket (CN301) .... (T)×1	20
28	4~10 UP *3	Remove in the same manner as no. 23.	19

*3. When inserting a printed circuit board, fit it into the channel provided in the chassis.

5-5. ■ Clock (16 UP, 18 UP), Frequency (17 UP), Antenna (13 UPa, b) Circuit Boards & Meter

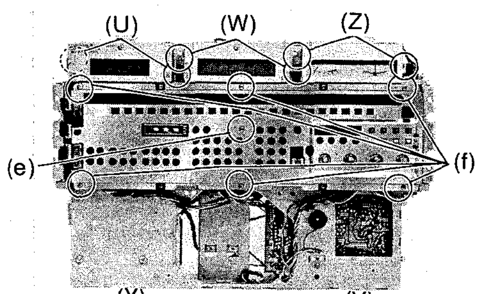


Fig. 21

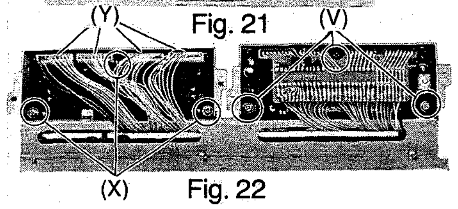


Fig. 22

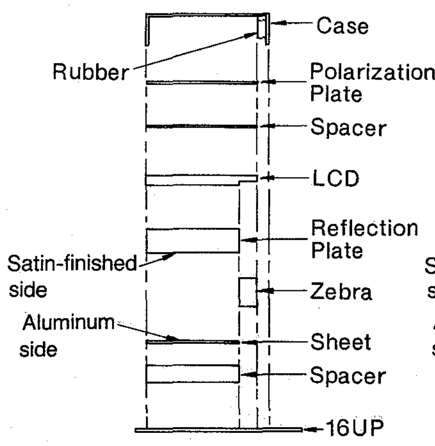

Case
Rubber
Polarization Plate
Spacer
LCD
Reflection Plate
Satin-finished side
Zebra
Aluminum side
Sheet
Spacer
16UP

Fig. 22-1

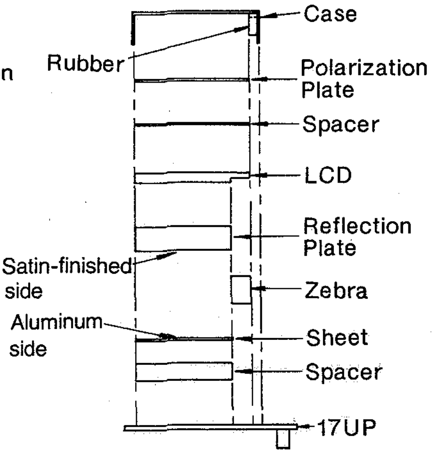

Case
Rubber
Polarization Plate
Spacer
LCD
Reflection Plate
Satin-finished side
Zebra
Aluminum side
Sheet
Spacer
17UP

Fig. 22-2

29	Clock Circuit Board	Screw (3×6) .... (U)×2	21
30	(16, 18 UP) & LCD *4	Screw (3×8) .... (V)×3	22
31	Frequency Circuit Board (17 UP) & LCD *5	Screw (3×6) .... (W)×2	21
32		Screw (3×8) .... (X)×3	22
33		Socket .... (Y)×4	22
34	Meter	Screw (3×6) .... (Z)×2	21
35	Antenna Circuit Board (13 UPa)	Screw (3×6) .... (a)×3	18
36		Socket (CN31, 34) .... (b)×2	18
37	Antenna Circuit Board (13 UPb)	Screw (3×6) .... (d)×2	18

*4. To replace the clock LCD, refer to Fig. 22-1.
*5. To replace the frequency LCD, refer to Fig. 22-2.

5-3. ■ Power Supply (12 UPa), EXT DC IN (12 UPc), DC-DC CONV (13 UPe), AF Filter (12 UPf) & AF AMP, Constant Voltage Power Supply (11 UPa, b) Circuit Boards

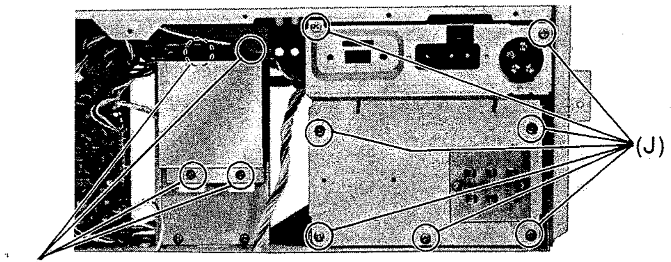


Fig. 12

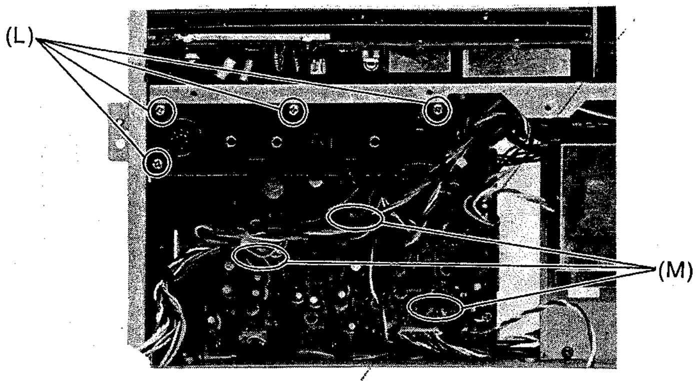


Fig. 13

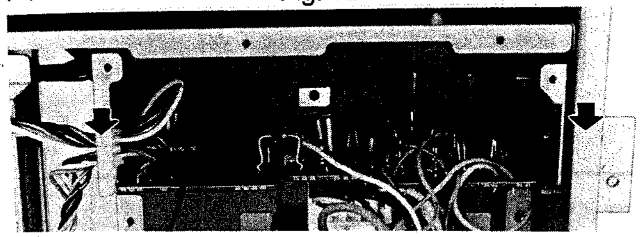


Fig. 14

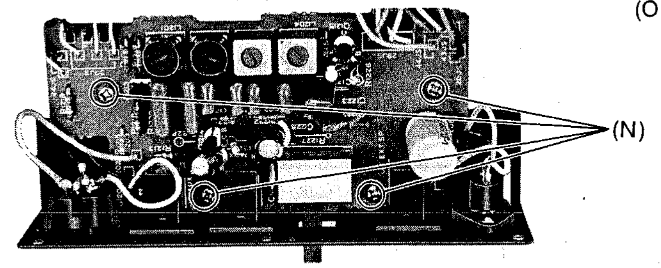


Fig. 15

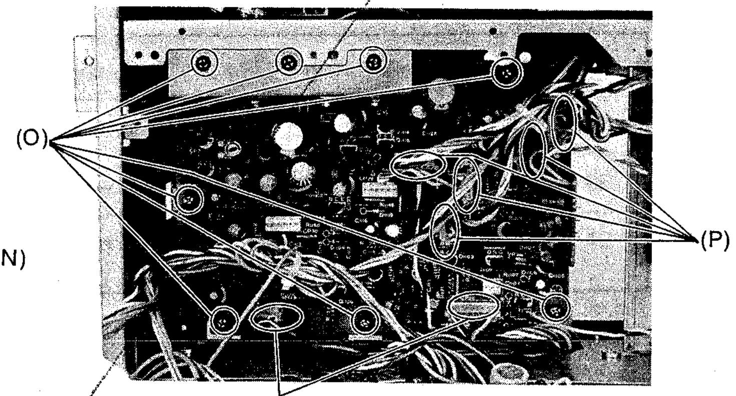


Fig. 16

13	Power Circuit Board	Screw (3×6) .... (J)×7	12
14	(12 UPa, 12 UPc)	Remove the circuit board in the direction of arrow.	14
15	DC-DC CONV (13 UPe)	Screw (3×6) .... (K)×4	12
16	AF Filter Circuit Board (12 UPf)	Screw (3×6) .... (L)×4	13
17		Socket (CN20, 29, 30) .... (M)×3	13
18		Screw (3×6) .... (N)×4	15
19	AF AMP, Constant Voltage Power	Screw (3×6) .... (O)×8	16
20	Supply Circuit Board (11 UPa, b)	Socket (CN21, 23~28) .... (P)×7	16

5-4. ■ 1 UP~10 UP

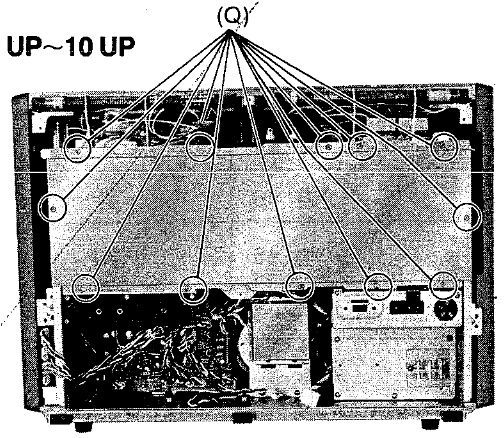


Fig. 17

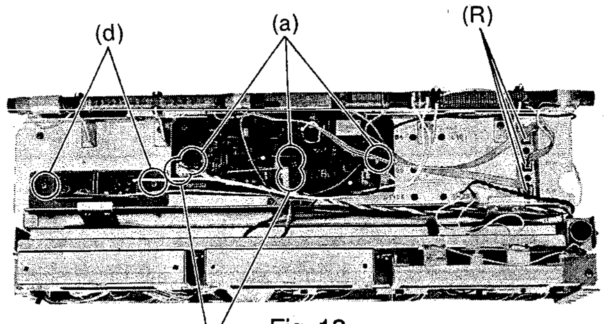


Fig. 18

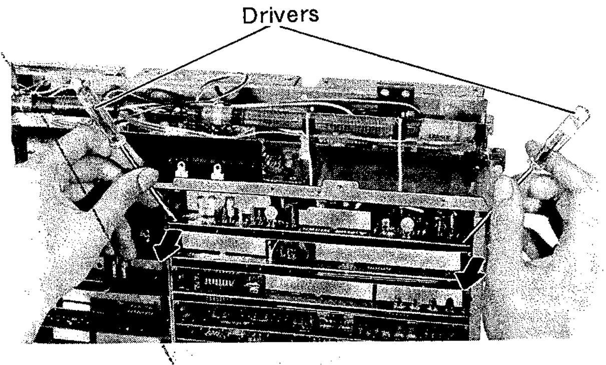


Fig. 19

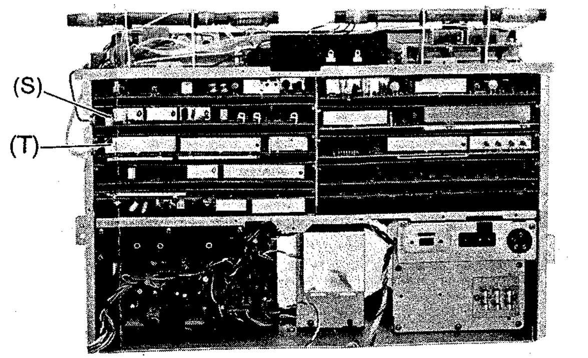


Fig. 20

21	Cover (1~10 UP)	Screw (3×6) .... (Q)×12	17
22	1 UP *3	Socket (CN101, 102, 103) .... (R)×3	18
23		Remove the circuit board with drivers in the direction of arrow.	19
24	2 UP *3	Remove in the same manner as no. 23.	19
25		Socket (CN4) .... (S)×1	20
26	3 UP *3	Remove in the same manner as no. 23.	19
27		Socket (CN301) .... (T)×1	20
28	4~10 UP *3	Remove in the same manner as no. 23.	19

*3. When inserting a printed circuit board, fit it into the channel provided in the chassis.

5-5. ■ Clock (16 UP, 18 UP), Frequency (17 UP), Antenna (13 UPa, b) Circuit Boards & Meter

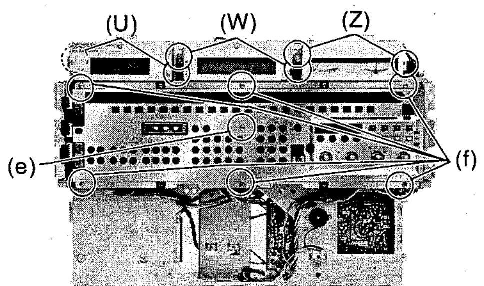


Fig. 21

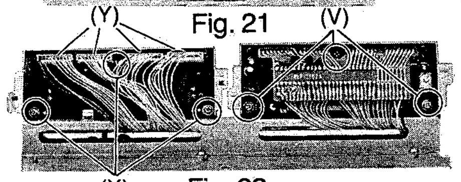


Fig. 22

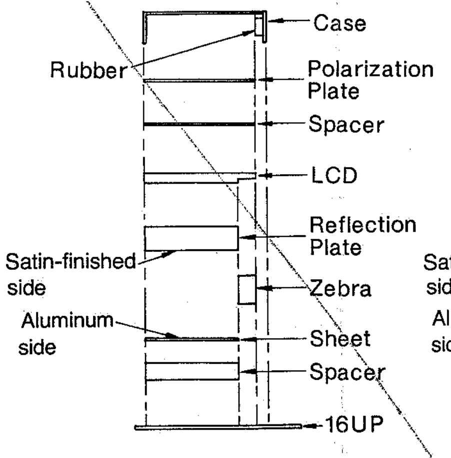

Case
Rubber
Polarization Plate
Spacer
LCD
Reflection Plate
Satin-finished side
Zebra
Aluminum side
Sheet
Spacer
16UP

Fig. 22-1

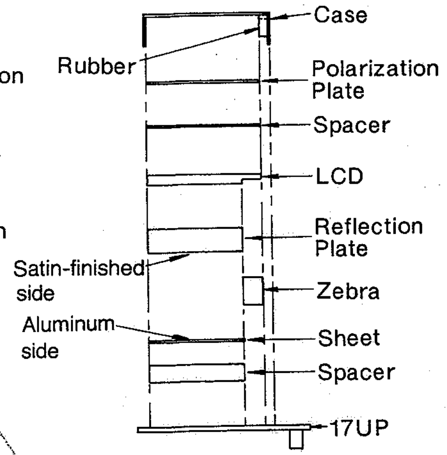

Case
Rubber
Polarization Plate
Spacer
LCD
Reflection Plate
Satin-finished side
Zebra
Aluminum side
Sheet
Spacer
17UP

Fig. 22-2

29	Clock Circuit Board (16, 18 UP) & LCD *4	Screw (3×6) .... (U)×2	21
30		Screw (3×8) .... (V)×3	22
31	Frequency Circuit Board (17 UP) & LCD *5	Screw (3×6) .... (W)×2	21
32		Screw (3×8) .... (X)×3	22
33		Socket .... (Y)×4	22
34	Meter	Screw (3×6) .... (Z)×2	21
35	Antenna Circuit Board (13 UPa)	Screw (3×6) .... (a)×3	18
36		Socket (CN31, 34) .... (b)×2	18
37	Antenna Circuit Board (13 UPb)	Screw (3×6) .... (d)×2	18

*4. To replace the clock LCD, refer to Fig. 22-1.
*5. To replace the frequency LCD, refer to Fig. 22-2.

5-6 ■ Key Board (14 UP)

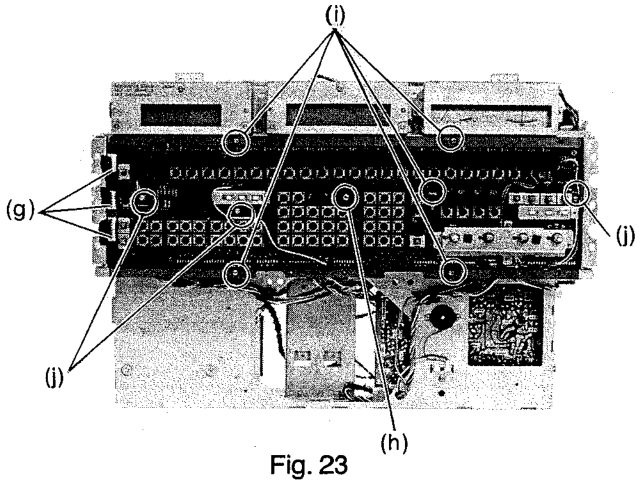


Fig. 23

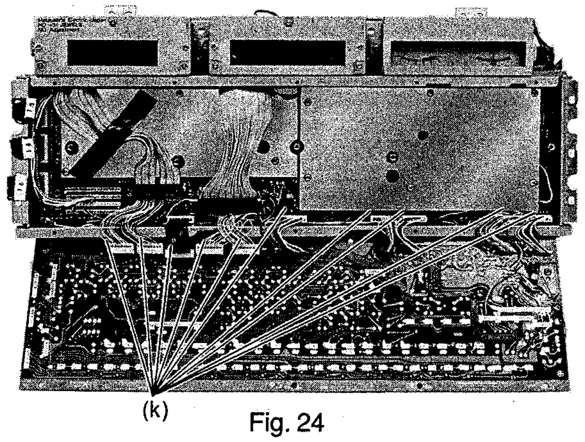


Fig. 24

38	Key Board (14 UP)	Stay Shaft .... (e)×1	21
39		Screw (3×6) .... (f)×6	21
40		Socket (CN13~15) .... (g)×3	23
41		Stay Shaft .... (h)×1	23
42		Screw (3×6) .... (i)×5	23
43		Screw (3×6) .... (j)×3	23
44		Socket .... (k)×10	24

5-7. ■ Common Board (15 UP)

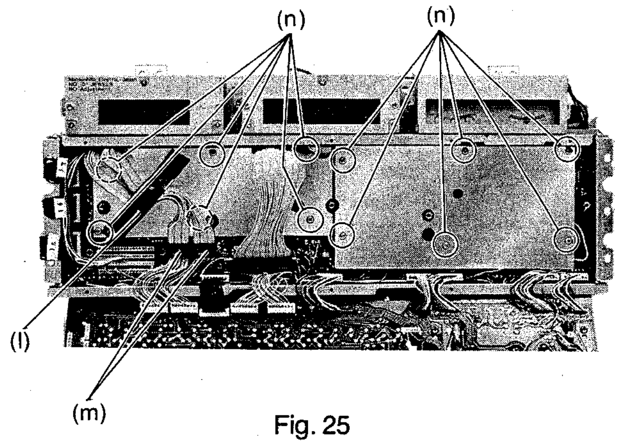


Fig. 25

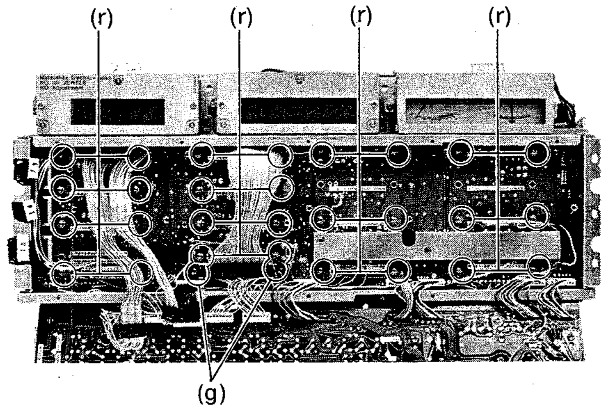


Fig. 26

45	Common Board (15 UP) *6	Tape .... (l)×1	25
46		Socket (CS100, 101) .... (m)×2	25
47		Screw (3×4) .... (n)×12	25
48		Remove the circuit board 1~10 UP, in the same way of 22~28.	—
49		Screw (3×12) .... (g)×2	26
50		Screw (2.6×12) .... (r)×28	26

*6. To remove the 15 UP completely, remove or loosen the socket and lead wire projecting from the 15 UP.

5-8. ■ Tuning Block (13 UPc) & Headphone (12 UPd), EP, Rec Out (12 UPe) Jack Board

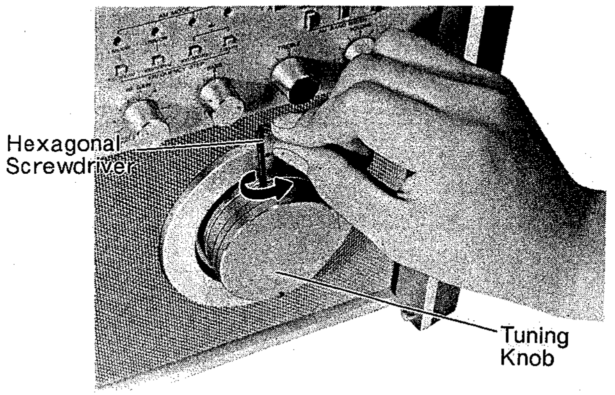


Fig. 27

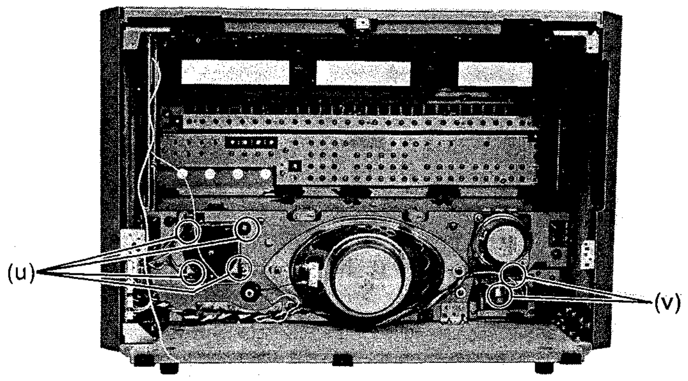


Fig. 28

51	Tuning Knob & Tuning Block (13 UPc)	Tuning Knob Screw (4×5) .... 🅣×2	27, 29
52		Tuning Knob	27
53		Screw (3×12) .... (u)×4	28
54	Headphone (12 UPd), EP, Rec Out (12 UPe) Jack Board	Screw (3×10) .... (v)×2	28

5-9. ■ Button, Handle, Handle Mechanism Block, Jack Cover, Front Panel & Indicating Plate

55	Button (w)	Screw (3×10) .... 🅧×10	29, 30
56	Button (y)	Screw (2.3×10) .... 🅐 ×5	29, 30
57	Handle	Screw (3×16) .... 🅑 ×6	29
58		Screw (3×6) .... 🅒 ×1	29
59		Spring & Stopper .... 🅓, 🅔 ×1	29
60		Screw (3×8) .... 🅕 ×2	29
61	Handle Mechanism, Block *7.	Screw (3×12) .... 🅖 ×2	29
62	Front Panel Jack Cover	Screw (3×8) .... 🅗 ×1	31
63		Screw (3×10) .... 🅘 ×2	31
64		Bracket .... 🅙 ×2	31
65		Badge (* 8) .... 🅚 ×1	31
66		Cover .... 🅛 ×1	31
67	Front Panel	Screw (3×16) .... 🅜 ×6	29
68	Indicating Plate	Screw (3×8) .... 🅝 ×5	29
69		Screw (2×8) .... 🅞 ×5	29

*7. When taking it apart refer to Fig. 29.
*8. Remove the National Panasonic badge by bending up the pins.

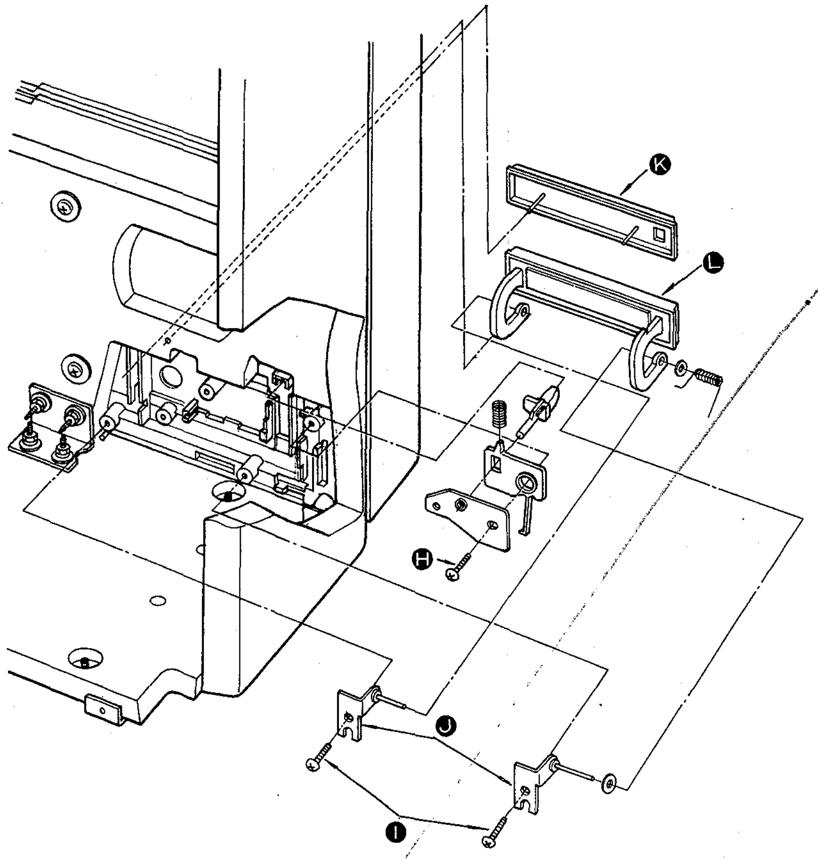


Fig. 31

5-10. ■ Tuning Block

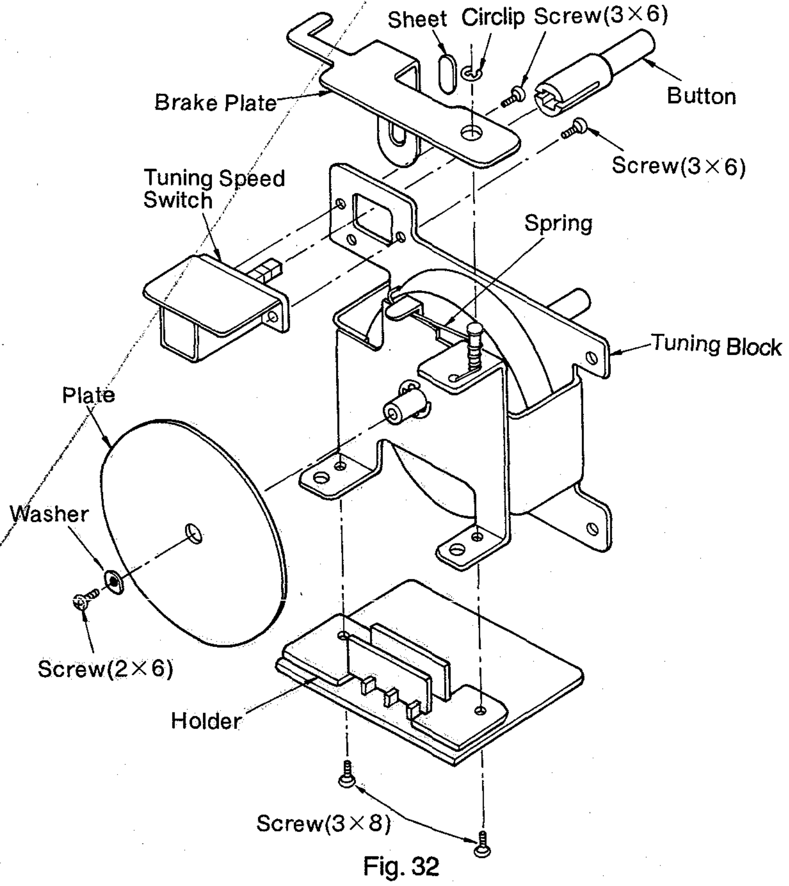

Sheet
Circlip
Screw(3×6)
Button
Brake Plate
Screw(3×6)
Tuning Speed Switch
Spring
Tuning Block
Plate
Washer
Screw(2×6)
Holder
Screw(3×8)

Fig. 32

5-11. ■ Connector Positions

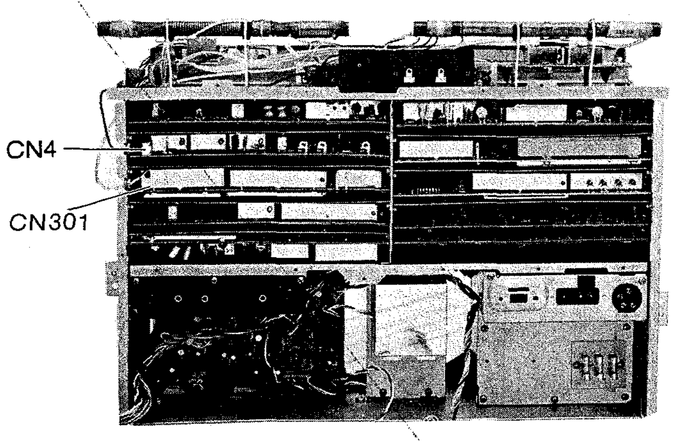


Fig. 33

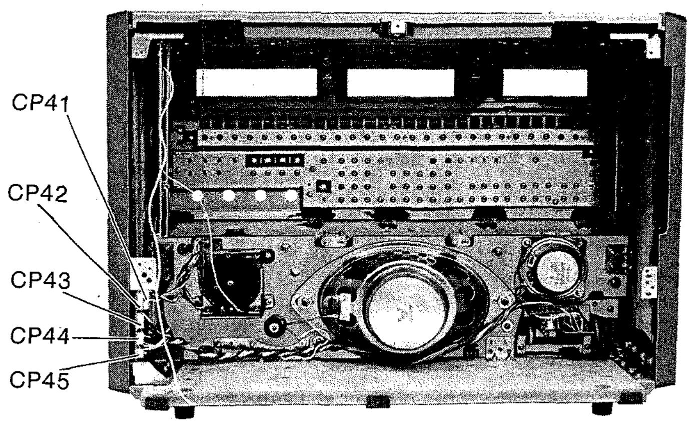

CP41
CP42
CP43
CP44
CP45

Fig. 34

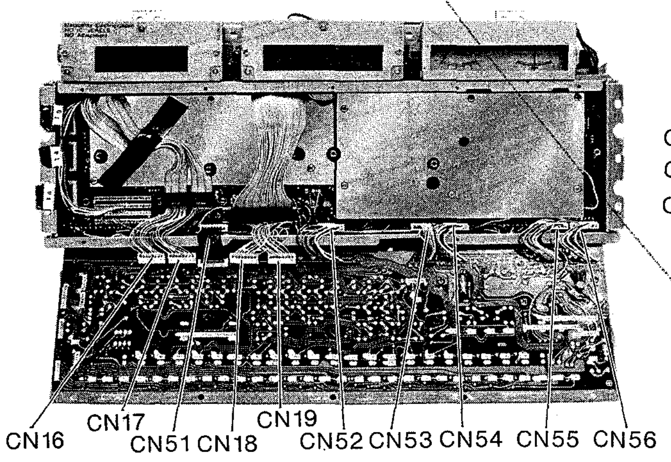

CN16
CN17
CN51
CN18
CN19
CN52
CN53
CN54
CN55
CN56

Fig. 35

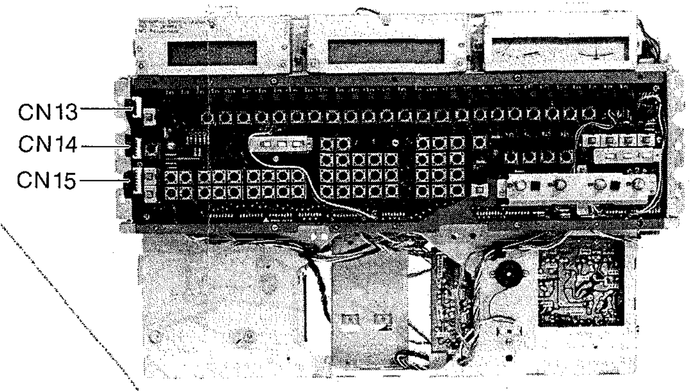

CN13
CN14
CN15

Fig. 36

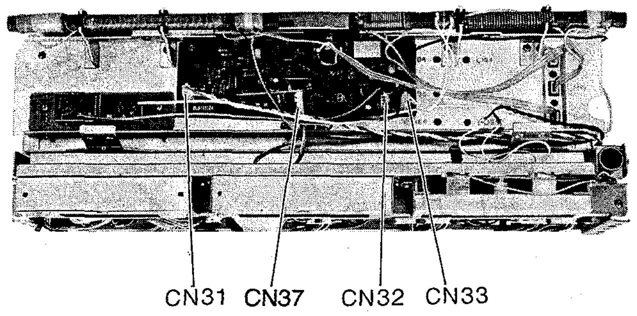

CN31
CN37
CN32
CN33

Fig. 37

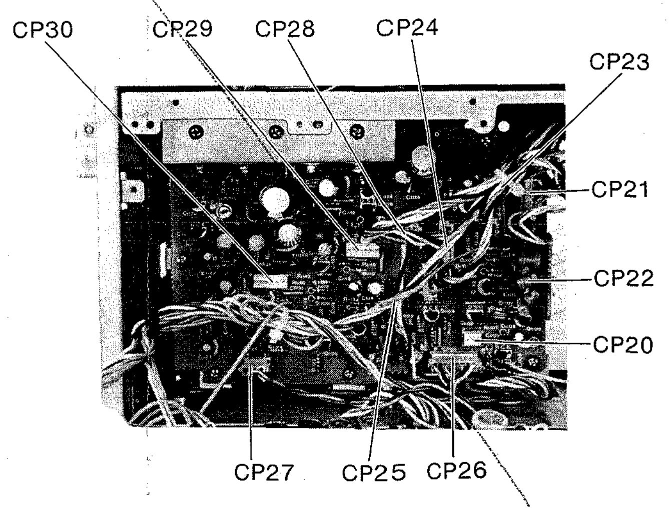

CP30
CP29
CP28
CP24
CP23
CP21
CP22
CP20
CP27
CP25
CP26

Fig. 38

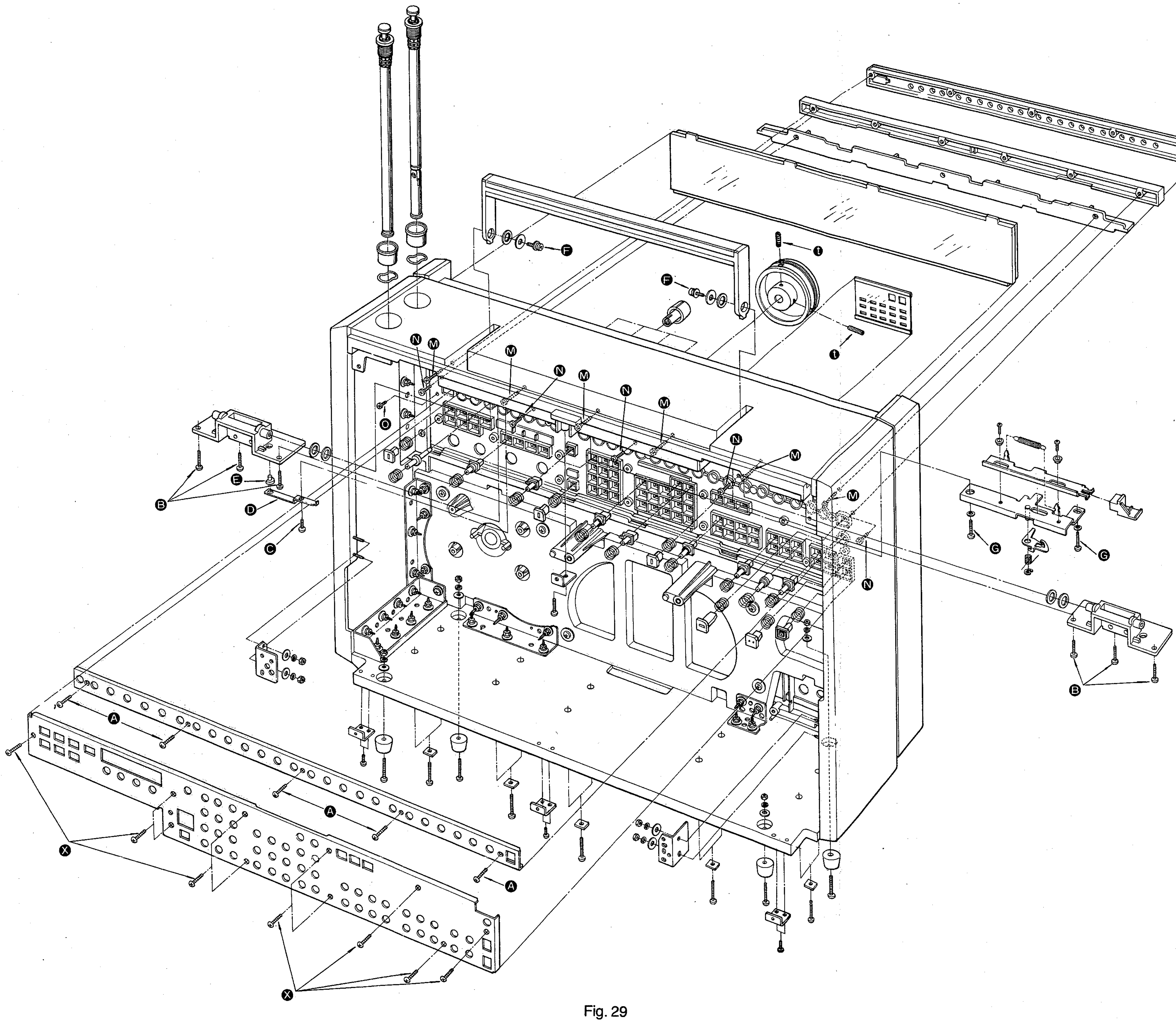
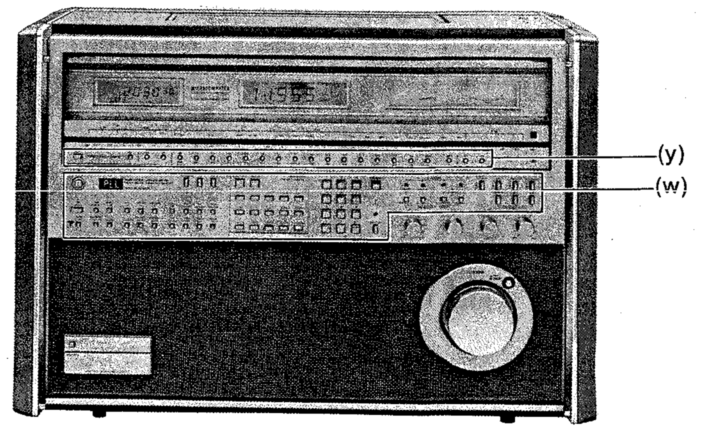
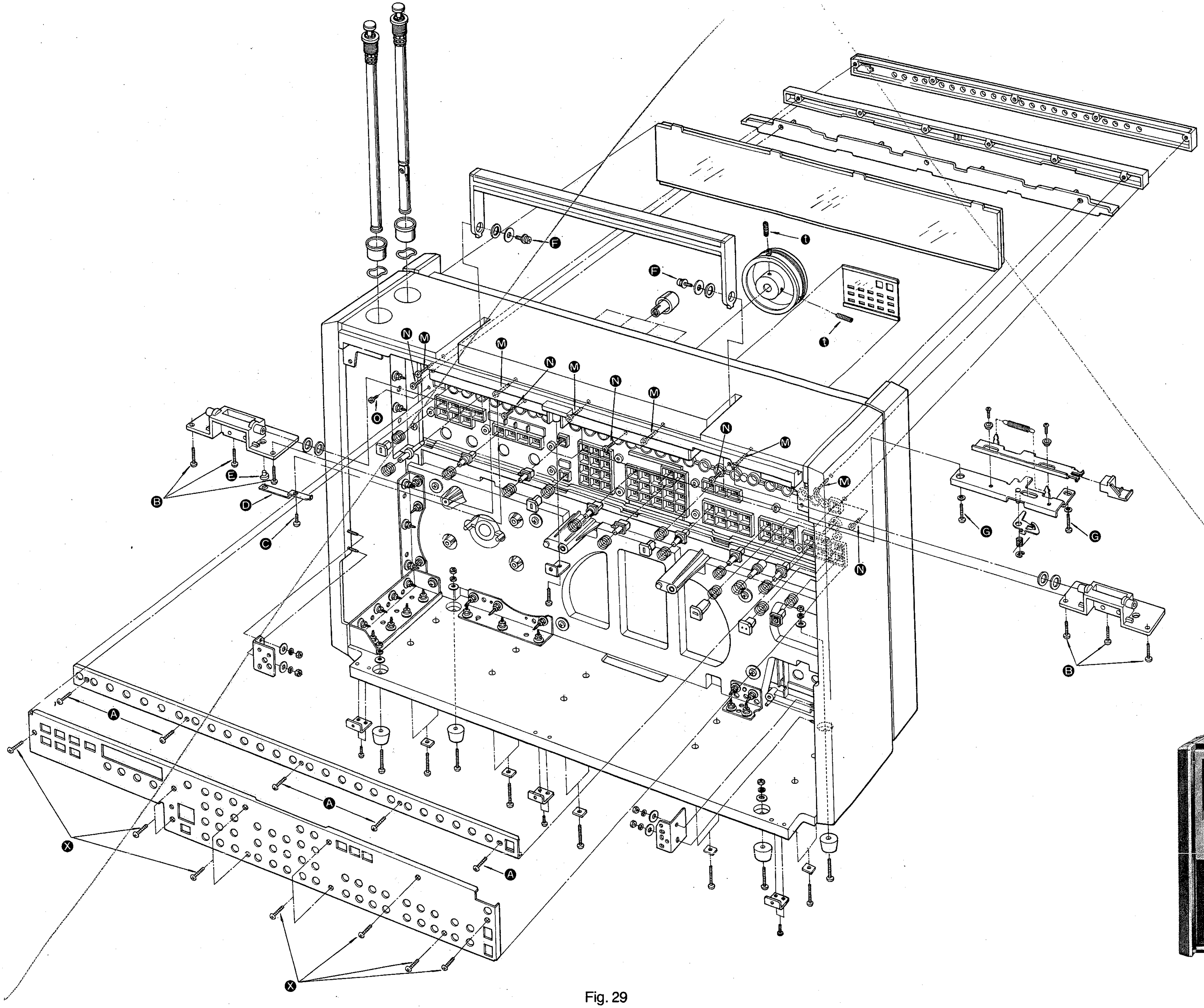

F
t
F
t
N
M
M
N
M
N
M
O
N
M
M
B
E
D
C
N
G
G
B
A
A
A
X
X

Fig. 29




F
t
F
t
N
M
M
N
M
N
M
O
N
M
M
N
B
E
D
C
G
G
B
A
A
A
X
X

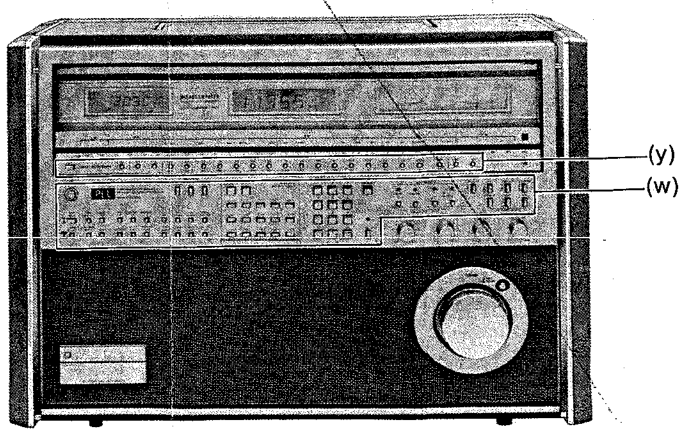


Fig. 29

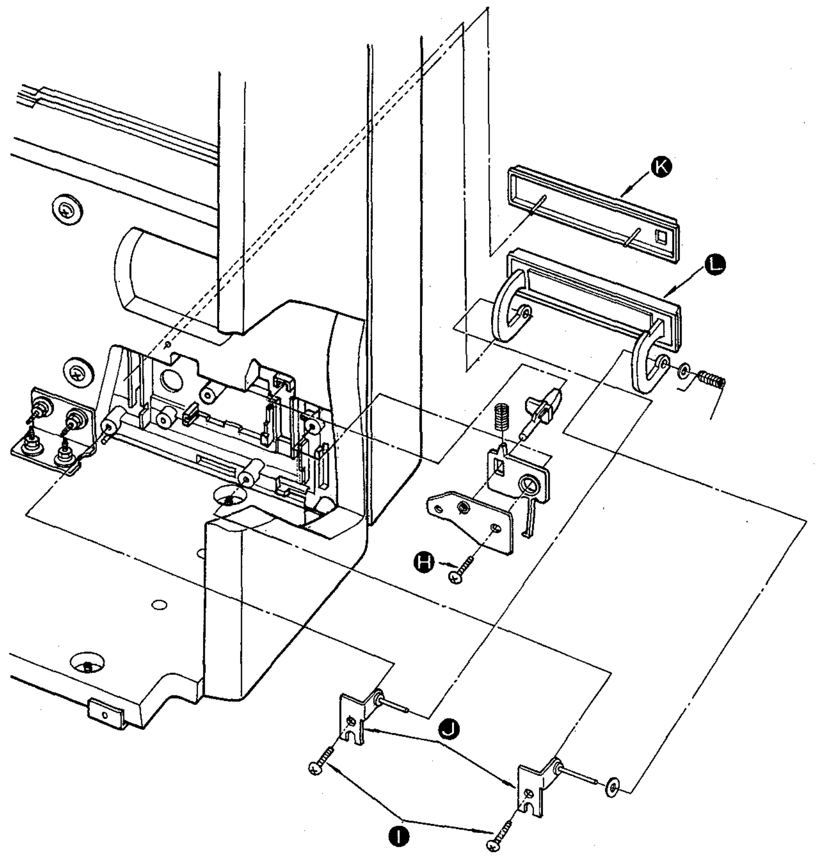


Fig. 31

5-10. ■ Tuning Block

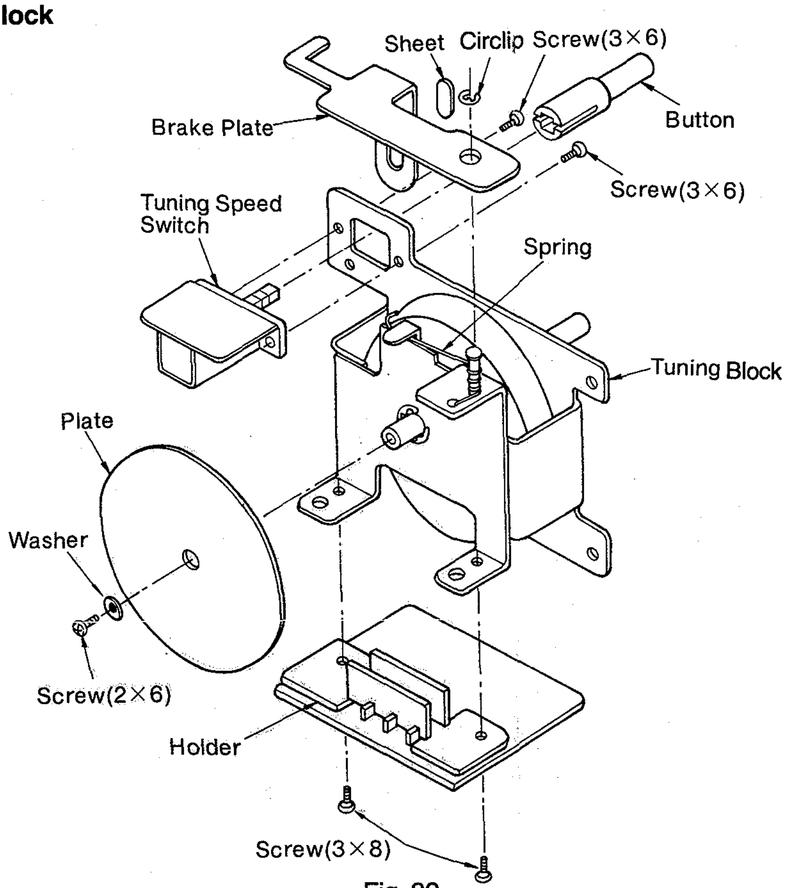

Sheet
Circlip
Screw(3×6)
Brake Plate
Button
Screw(3×6)
Tuning Speed Switch
Spring
Tuning Block
Plate
Washer
Screw(2×6)
Holder
Screw(3×8)

Fig. 32

5-11. ■ Connector Positions

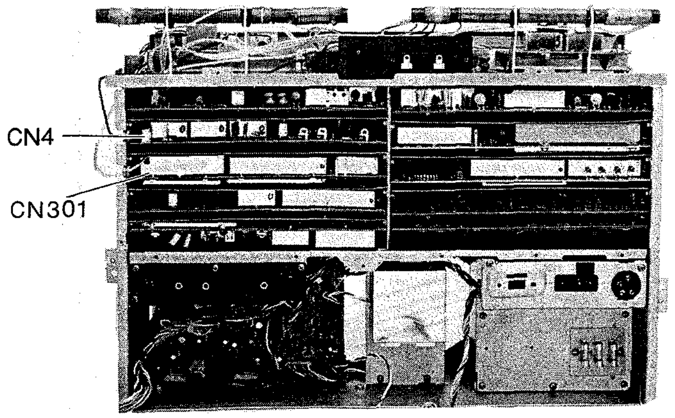


Fig. 33

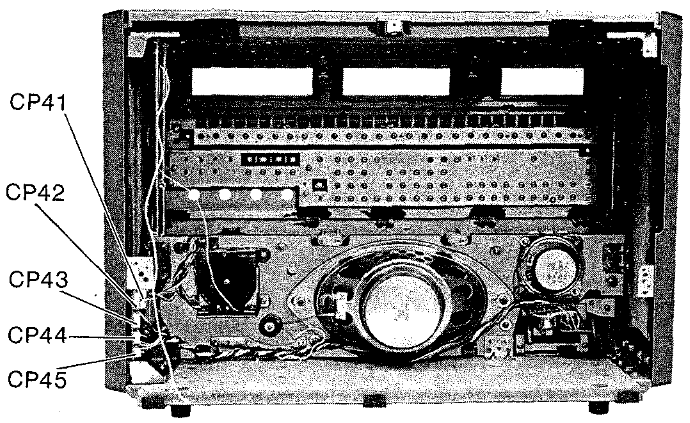

CP41
CP42
CP43
CP44
CP45

Fig. 34

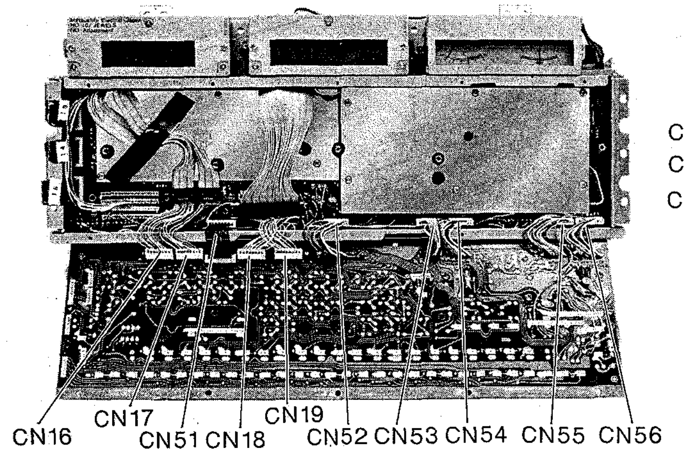

CN16
CN17
CN51
CN18
CN19
CN52
CN53
CN54
CN55
CN56

Fig. 35

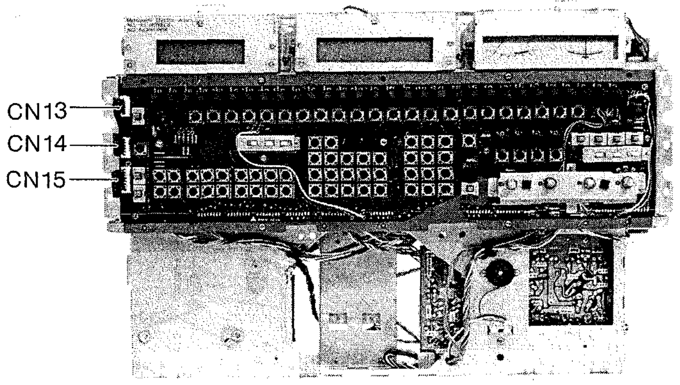

CN13
CN14
CN15

Fig. 36

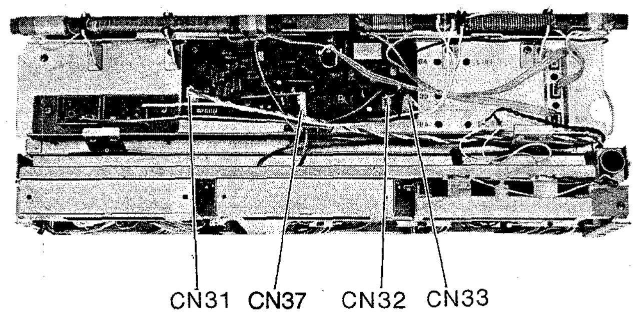

CN31
CN37
CN32
CN33

Fig. 37

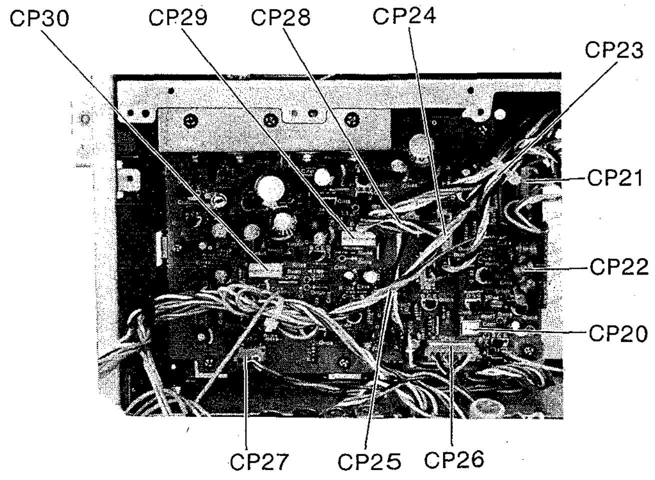

CP30
CP29
CP28
CP24
CP23
CP21
CP22
CP20
CP27
CP25
CP26

Fig. 38

6. FM/LW/MW/SW World-wide Receiver With Phase-Locked Loop Synthesizer

BLOCK DIAGRAM-MODEL RF-9000

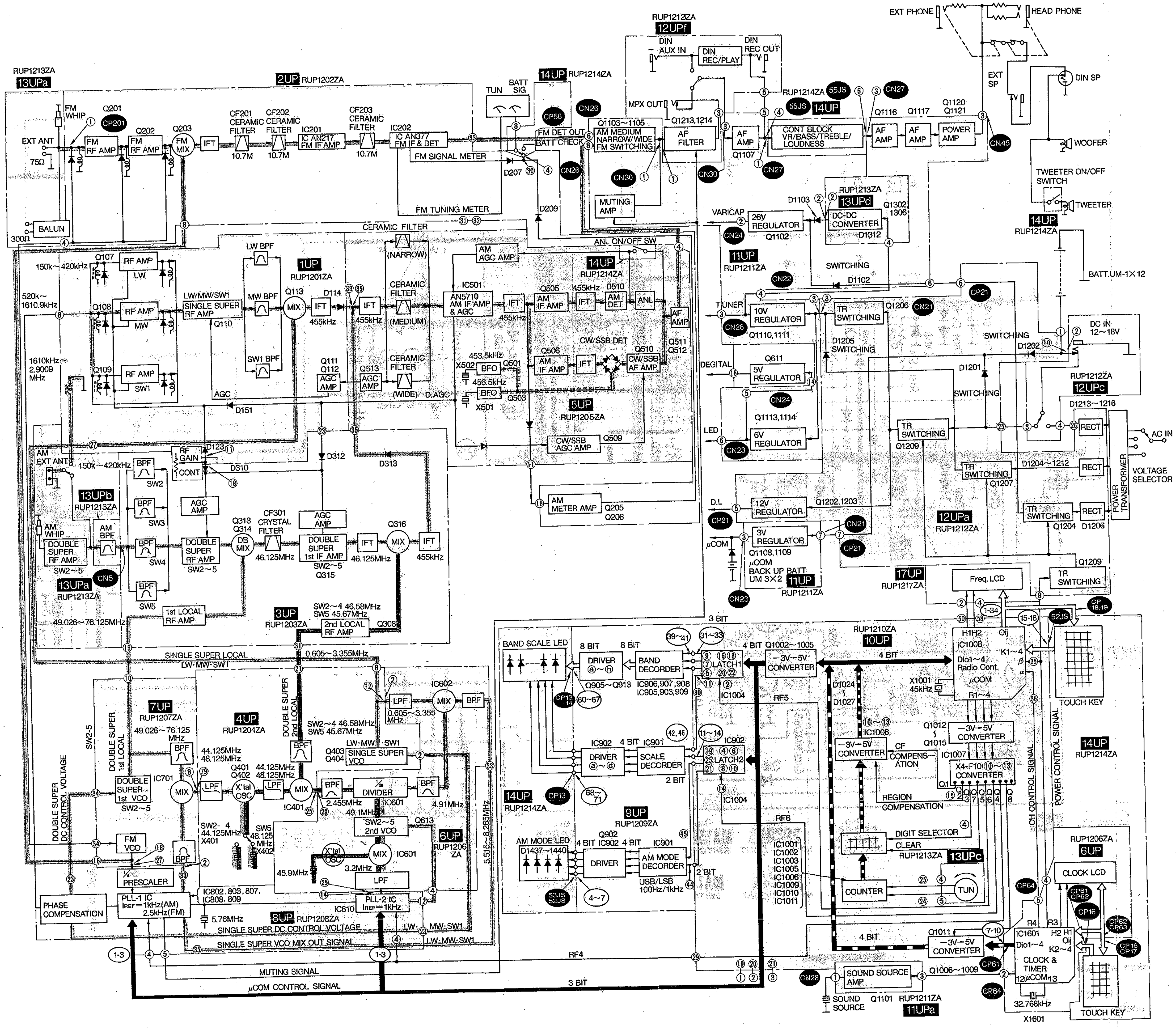
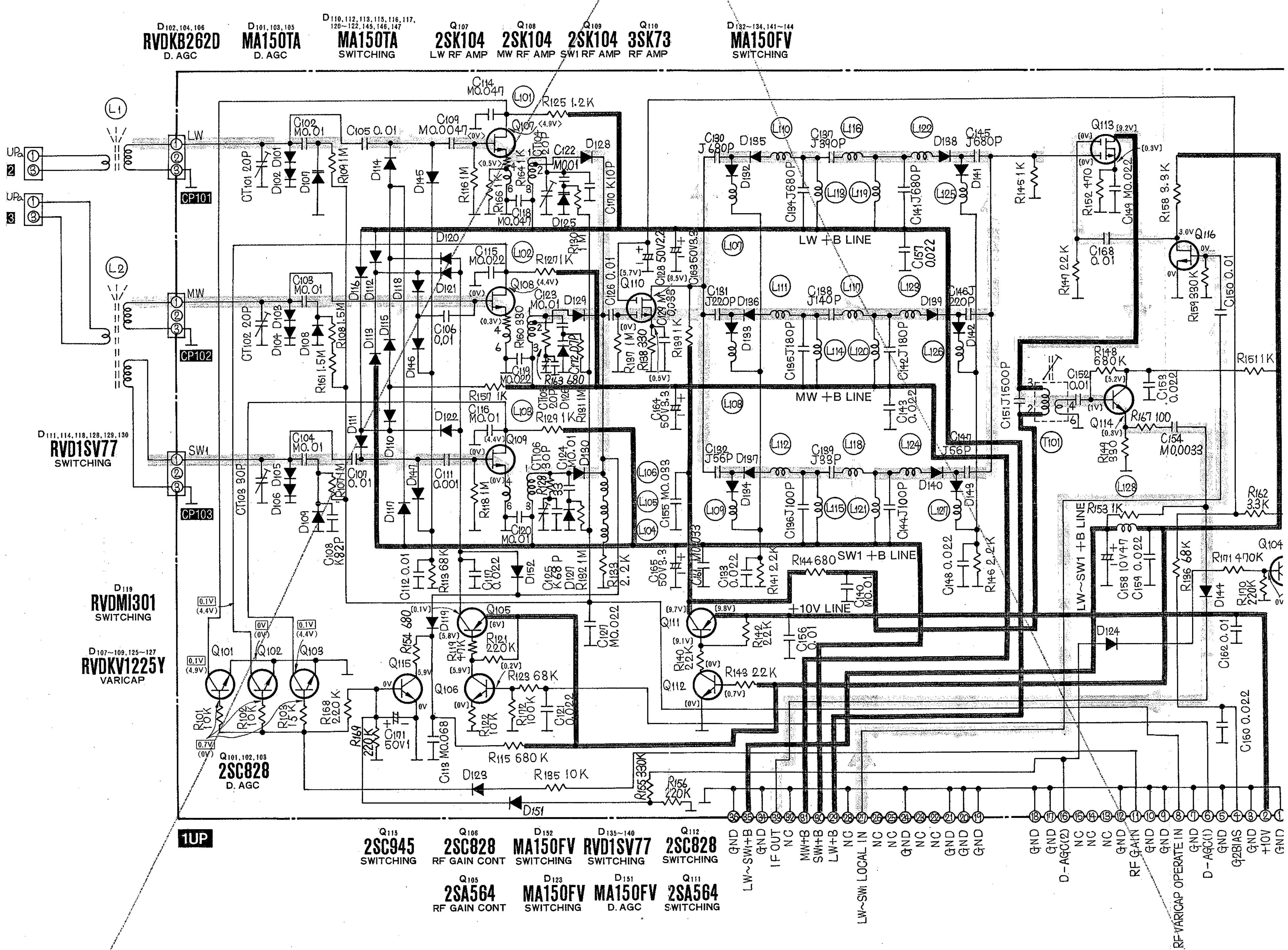

RUP1213ZA
13UPa
2UP RUP1202ZA
14UP RUP1214ZA
RUP1212ZA
12UPf
DIN AUX IN
DIN REC/PLAY
DIN REC OUT
EXT PHONE
HEAD PHONE
EXT SP
DIN SP
WOOFER
TWEETER ON/OFF SWITCH
TWEETER
FM WHIP
EXT ANT
75Ω
300Ω
BALUN
Q201
CP201
Q202
Q203
FM RF AMP
FM MIX
IFT
CF201 CERAMIC FILTER
CF202 CERAMIC FILTER
10.7M
IC201 IC AN217 FM IF AMP
CF203 CERAMIC FILTER
IC202 IC AN377 FM IF & DET
FM SIGNAL METER
FM TUNING METER
TUN
BATT SIG
CP56
CN26
FM DET OUT
BATT CHECK
D207
D209
Q1103~1105 AM MEDIUM NARROW/WIDE FM SWITCHING
MPX OUT
Q1213,1214
AF FILTER
CN30
MUTING AMP
AF AMP
Q1107
CN27
RUP1214ZA
55JS
14UP
CONT BLOCK VR/BASS/TREBLE/LOUDNESS
Q1116
Q1117
Q1120 Q1121
AF AMP
POWER AMP
CN45
CERAMIC FILTER
ANL ON/OFF SW
1UP
RUP1201ZA
LW BPF
150k~420kHz
Q107
RF AMP LW
520k~1610.9kHz
Q108
RF AMP MW
1610kHz~2.9009MHz
Q109
RF AMP SW1
LW/MW/SW1 SINGLE SUPER RF AMP
Q110
MW BPF
SW1 BPF
Q113
MIX
IFT
D114
455kHz
CERAMIC FILTER (NARROW)
CERAMIC FILTER (MEDIUM)
CERAMIC FILTER (WIDE)
D.AGC
Q111 Q112
AGC AMP
Q513
AGC
D151
AM AGC AMP
IC501 AN5710 AM IF AMP & AGC
14UP RUP1214ZA
Q505
455kHz
D510
AM IF AMP
AM DET
ANL
AF AMP
CW/SSB DET
Q506
453.5kHz
X602
BFO
Q501
456.5kHz
X501
Q503
Q510
CW/SSB AF AMP
Q511 Q512
5UP
RUP1205ZA
CW/SSB AGC AMP
Q509
AM METER AMP
Q205 Q206
AM EXT ANT
150k~420kHz
BPF
SW2
RF GAIN
CONT
D123
D310
D312
D313
13UPb
RUP1213ZA
AM WHIP
DOUBLE SUPER RF AMP
SW2~5
AM BPF
SW3
SW4
SW5
AGC AMP
Q313 Q314
CF301 CRYSTAL FILTER
DB MIX
46.125MHz
DOUBLE SUPER 1st IF AMP
SW2~5
Q315
Q316
CN5
13UPa
RUP1213ZA
1st LOCAL RF AMP
49.026~76.125MHz
3UP
RUP1203ZA
SW2~4 46.58MHz
SW5 45.67MHz
2nd LOCAL RF AMP
Q308
SINGLE SUPER LOCAL LW·MW·SW1
0.605~3.355MHz
IC602
LPF
MIX
BPF
7UP
RUP1207ZA
49.026~76.125MHz
DOUBLE SUPER 1st LOCAL
DOUBLE SUPER DC CONTROL VOLTAGE
44.125MHz 48.125MHz
IC701
DOUBLE SUPER 1st VCO
4UP
RUP1204ZA
DOUBLE SUPER 2nd LOCAL
SW2~4 46.58MHz
SW5 45.67MHz
LW·MW·SW1
Q403 Q404 SINGLE SUPER VCO
Q401 Q402
X'tal OSC
IC401
1/2 DIVIDER
2.455MHz
49.1MHz
IC601
4.91MHz
SW2~5 2nd VCO
Q613
6UP
RUP1206ZA
5.515~8.265MHz
X401
45.9MHz
3.2MHz
FM VCO
1/4 PRESCALER
PHASE COMPENSATION
PLL-1 IC IREF=1kHz(AM) 2.5kHz(FM)
IC802,803,807,IC808,809
5.76MHz
8UP RUP1208ZA
IC810
PLL-2 IC IREF=1kHz
SINGLE SUPER DC CONTROL VOLTAGE
SINGLE SUPER VCO MIX OUT SIGNAL
LW·MW·SW1
MUTING SIGNAL
μCOM CONTROL SIGNAL
3 BIT
RF4
VARICAP
26V REGULATOR
Q1102
CN24
D1103
RUP1213ZA
13UPd
DC-DC CONVERTER
D1312
Q1302 1306
11UP
RUP1211ZA
SWITCHING
D1102
TUNER
10V REGULATOR
Q1110,1111
CN26
TR SWITCHING
D1205 SWITCHING
Q1206
CN21
CP21
DIGITAL
Q611
5V REGULATOR
Q1113,1114
LED
6V REGULATOR
CN23
D.L
12V REGULATOR
Q1202,1203
μCOM
3V REGULATOR
Q1108,1109
μCOM BACK UP BATT UM 3×2
11UP
RUP1211ZA
BATT.UM-1×12
DC IN 12~18V
D1202
D1201
SWITCHING
RUP1212ZA
12UPc
D1213~1216
RECT
AC IN
TR SWITCHING
Q1209
D1204~1212
Q1207
VOLTAGE SELECTOR
POWER TRANSFORMER
12UPa
RUP1212ZA
Q1204
D1206
Q1209
TR SWITCHING
17UP
RUP1217ZA
Freq.LCD
BAND SCALE LED
8 BIT
DRIVER ⓐ~ⓗ
Q905~Q913
BAND DECORDER
IC906,907,908
IC905,903,909
LATCH1
IC1004
4 BIT Q1002~1005
−3V~5V CONVERTER
RUP1210ZA
10UP
RF5
IC902
DRIVER ⓐ~ⓓ
IC901
SCALE DECORDER
LATCH2
2 BIT
CP13
14UP
RUP1214ZA
9UP
RUP1209ZA
AM MODE LED D1437~1440
Q902
IC902
DRIVER
IC901
AM MODE DECORDER
USB/LSB 100Hz/1kHz
53JS 52JS
RF6
IC1001 IC1002 IC1003 IC1005 IC1006 IC1009 IC1010 IC1011
D1024 D1027
IC1006
−3V~5V CONVERTER
CF COMPENSATION
IC1007
Q1012 Q1015
−3V~5V CONVERTER
X4-F10 CONVERTER
REGION COMPENSATION
DIGIT SELECTOR
CLEAR
RUP1213ZA
13UPc
COUNTER
TUN
H1H2
IC1008
Dio1~4 Radio Cont.
μCOM
X1001 45kHz
K1~4
R1~4
TOUCH KEY
CH CONTROL SIGNAL
POWER CONTROL SIGNAL
14UP
RUP1214ZA
RUP1206ZA
6UP
CLOCK LCD
CP64
CP61 CP62
CP16
CP62 CP63
4 BIT
Q1011
−3V~5V CONVERTER
IC1601
Dio1~4
CLOCK & TIMER
12μCOM13
K2~4
32.768kHz
X1601
TOUCH KEY
CN28
SOUND SOURCE AMP
Q1006~1009
SOUND SOURCE
Q1101
RUP1211ZA
11UPa

Fig. 39

SCHEMATIC DIAGRAM (1 UP) . . . LW, MW, SW1—RF


D102, 104, 106 RVDKB262D D. AGC
D101, 103, 105 MA150TA D. AGC
D110, 112, 113, 115, 116, 117, 120~122, 145, 146, 147 MA150TA SWITCHING
Q107 2SK104 LW RF AMP
Q108 2SK104 MW RF AMP
Q109 2SK104 SW1 RF AMP
Q110 3SK73 RF AMP
D132~134, 141~144 MA150FV SWITCHING
D111, 114, 118, 128, 129, 130 RVD1SV77 SWITCHING
D119 RVDMI301 SWITCHING
D107~109, 125~127 RVDKV1225Y VARICAP
Q101, 102, 103 2SC828 D. AGC
Q115 2SC945 SWITCHING
Q106 2SC828 RF GAIN CONT
D152 MA150FV SWITCHING
D135~140 RVD1SV77 SWITCHING
Q112 2SC828 SWITCHING
Q105 2SA564 RF GAIN CONT
D123 MA150FV SWITCHING
D151 MA150FV D. AGC
Q111 2SA564 SWITCHING
1UP
CP101
CP102
CP103
LW +B LINE
MW +B LINE
SW1 +B LINE
+10V LINE
LW~SW1 +B LINE
GND
LW~SW+B
GND
IF OUT
NC
MW+B
SW+B
LW+B
NC
LW~SW LOCAL IN
NC
NC
GND
NC
NC
GND
GND
GND
GND
GND
D-AGC(2)
NC
NC
GND
RF GAIN
GND
GND
RF VARICAP OPERATE IN
GND
D-AGC(1)
GND
G2BIAS
GND
+10V
GND

surements are taken with electronics voltmeter
minal of battery.
MIN position, ( ) . . . RF GAIN MAX position,
n, 《 》. . . MW position,
ion. 〚 〛. . . AM position.

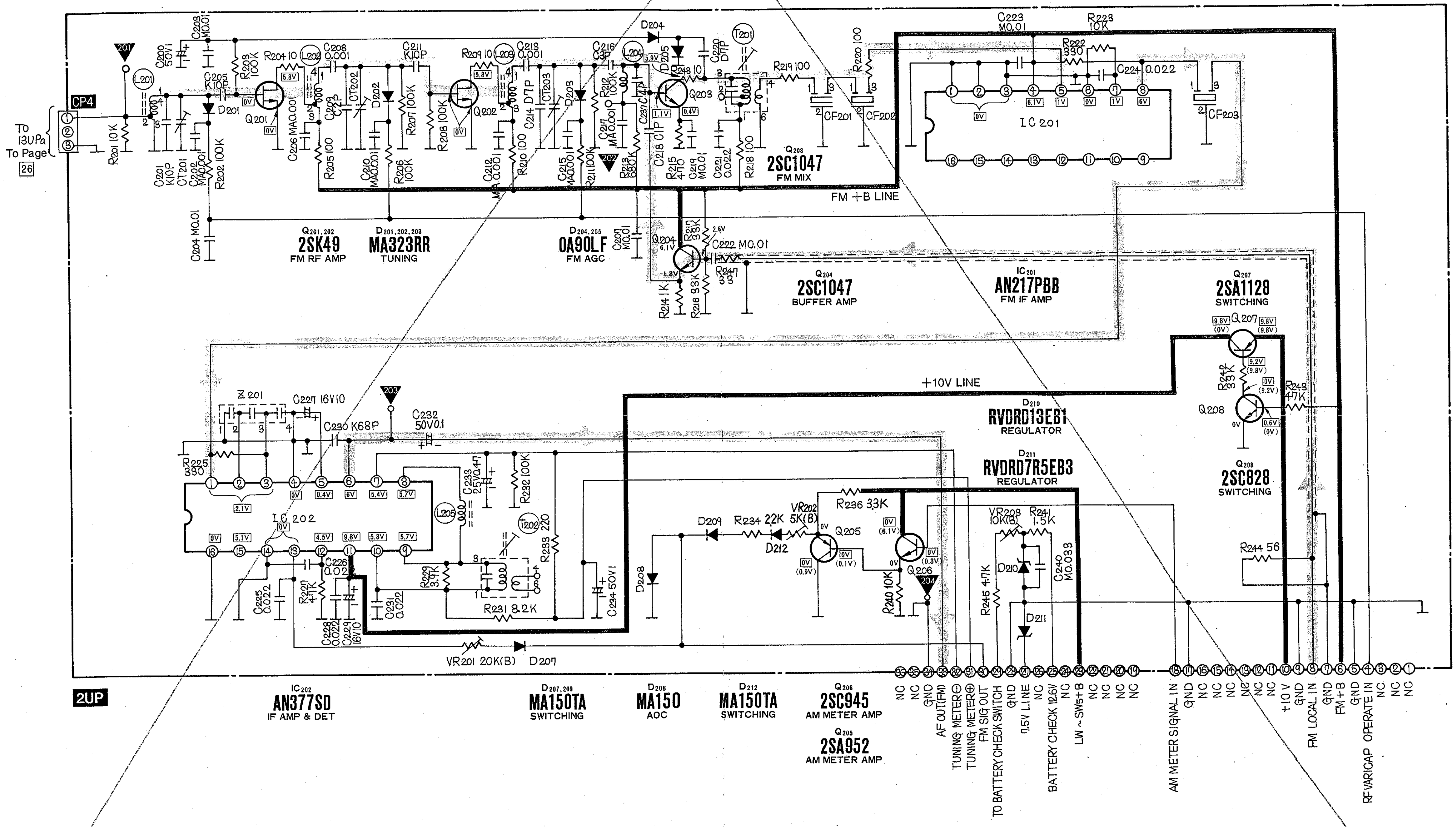
Bemerkungen:

1. Alle Gleichspannungen sind mit einem Elektronikvoltmeter vom negativen Batterieanschluß aus zu messen.
   ▭ . . . HF-Verstärkungsregler auf „MIN"
   ( ) . . . HF-Verstärkungsregler auf „MAX"
   〈 〉. . . Stellung „LW", 《 》. . . Stellung „MW",
   [ ] . . . Stellung „KW 1". 〚 〛. . . Stellung „AM".

Remarque:

1. La tension c.c. est mesurée au moyen d'un voltmétre électronique à partir de la borne négative de la pile.
   ▭ . . . Position "MIN" de la commande de gain HF (RF GAIN),
   ( ) . . . Position "MAX" de la commande de gain HF (RF GAIN),
   〈 〉. . . Position GO, 《 》. . . Position PO,
   [ ] . . . Position OC1, 〚 〛. . . Position AM.

SCHEMATIC DIAGRAM (2 UP) . . . FM RF IF DET & METER CIRCUIT


CP4
To 13UPa To Page 26
201
L201
R201 10K
C200 50V1
C203 M0.01
C205 K10P
D201
Q201
R203 100K
R204 10
L202
C208 0.001
C206 MA0.001
R205 100
CT201
C201 K10P
C202 MA0.001
R202 100K
C204 M0.01
CT202
C209 D7P
D202
C210 MA0.001
R206 100K
C211 K10P
R207 100K
R208 100K
R209 10
L203
Q202
C213 0.001
C212 MA0.001
R210 100
C214 D7P
CT203
D203
C215 MA0.001
C216 D3P
L204
D204
D205
R248 10
Q203
R211 100K
R212 10K
C217 MA0.001
202
R213 68K
C237 C1P
C218 C1P
R215 470
C219 M0.01
C221 0.022
R218 100
C220 D7P
T201
R219 100
R220 100
CF201
CF202
2SC1047
FM MIX
FM +B LINE
C223 M0.01
R223 10K
R222 330
C224 0.022
IC 201
CF203
Q201,202 2SK49 FM RF AMP
D201,202,203 MA323RR TUNING
D204,205 OA90LF FM AGC
C207 M0.01
Q204
R210 33K
C222 M0.01
R247 33
R214 1K
R216 33K
Q204 2SC1047 BUFFER AMP
IC201 AN217PBB FM IF AMP
Q207 2SA1128 SWITCHING
Q207
R242 33K
R243 47K
Q208
+10V LINE
D210 RVDRD13EB1 REGULATOR
D211 RVDRD7R5EB3 REGULATOR
Q208 2SC828 SWITCHING
Z201
C227 16V10
203
C230 K68P
C232 50V0.1
R225 330
IC 202
L205
C233 25V0.47
R232 100K
T202
R233 220
C225 0.022
R221 4.7K
C226 0.022
C228 0.022
C229 16V10
C231 0.022
R229 3.7K
R231 8.2K
C234 50V1
D208
D209
R234 22K
D212
VR202 5K(B)
R236 33K
Q205
Q206
204
R240 10K
VR203 10K(B)
R241 1.5K
R245 4.7K
D210
C240 M0.033
D211
R244 56
VR201 20K(B)
D207
2UP
IC202 AN377SD IF AMP & DET
D207,209 MA150TA SWITCHING
D208 MA150 AOC
D212 MA150TA SWITCHING
Q206 2SC945 AM METER AMP
Q205 2SA952 AM METER AMP
NC
NC
GND
AF OUT(FM)
TUNING METER⊖
TUNING METER⊕
FM SIG OUT
TO BATTERY CHECK SWITCH
GND
9.5V LINE
NC
BATTERY CHECK 12.6V
NC
LW~SW5+B
NC
NC
NC
NC
AM METER SIGNAL IN
GND
NC
NC
NC
NC
NC
+10V
GND
FM LOCAL IN
GND
FM+B
GND
RF VARICAP OPERATE IN
NC
NC

Notes:

1. The mark (▼) shows test point, e.g. ▼=test point 1.
2. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
   ☐ . . . FM position, ( ) . . . AM position.
3. VR201 . . . FM signal meter adjustment, VR202 . . . AM signal meter adjustment, VR203 . . . Battery check adjustment.

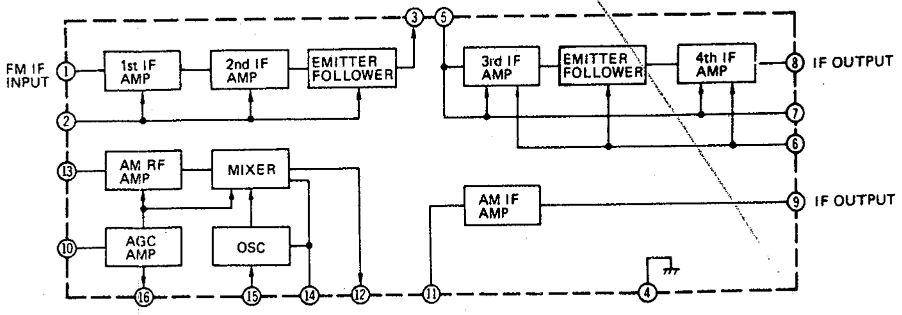
Bemerkungen:

1. Die Markierung (▼) bezeichnet einen Meßpunkt, z.B: ▼= Meßpunkt 1.
2. Alle Gleichspannungen sind mit einem Elektronikvoltmeter vom negativen Batterieanschluß aus zu messen.
   ☐ . . . Stellung „UKW", ( ) . . . Stellung „AM".
3. VR201 . . . RW zur Einstellung der FM-Signalstärkeanzeige.
   VR202 . . . RW zur Einstellung der AM-Signalstärkeanzeige.
   VR203 . . . RW zur Einstellung der Batterieanzeige.

Remarques:

1. La marque (▼) signale un point de vérification. EX.: ▼ =point de vérification 1.
2. La tension c.c. est mesurée au moyen d'un voltmétre électronique à partir de la borne négative de la pile.
   ☐ Position FM, ( ) . . . Position AM.
3. VR201 . . . Réglage du Vu-mètre de signal FM,
   VR202 . . . Réglage du Vu-mètre de signal AM,
   VR203 . . . Commande de vérification des piles.

IC201 AN217PBB


FM IF INPUT
1st IF AMP
2nd IF AMP
EMITTER FOLLOWER
3rd IF AMP
EMITTER FOLLOWER
4th IF AMP
IF OUTPUT
AM RF AMP
MIXER
AM IF AMP
IF OUTPUT
AGC AMP
OSC

1 UP 1 UP

CIRCUIT BOARD WIRING VIEW (1 UP) . . . LW, MW, SW1—RF CIRCUIT

Q114

	AM
C	5.2V
B	1V
E	0.3V

Q113

	AM
D	9.2V
G1	0V
G2	0V
S	0.3V

Q116

D	3.0V
G	0V
S	0V

Q105

	AM
C	0.1V
B	5.8V
E	6V

Q106

	AM
C	5.9V
B	0.2V
E	0V

Q109

	SW1
D	4.4V
G	0V
S	0V

Q103

	RF GAIN MIN	RF GAIN MAX
C	0.1V	4.4V
B	0.7V	0V
E	0V	0V

Q115

C	5.9V
B	0V
E	0V

Q108

	MW
D	4.4V
G	0V
S	0.3V

Q102

	RF GAIN MIN	RF GAIN MAX
C	0.1V	4.4V
B	0.7V	0V
E	0V	0V

Q107

	LW
D	4.9V
G	0V
S	0.5V

Q101

	RF GAIN MIN	RF GAIN MAX
C	0.1V	4.9V
B	0.7V	0V
E	0V	0V

Q111

	AM
C	9.7V
B	9.1V
E	9.8V

Q112

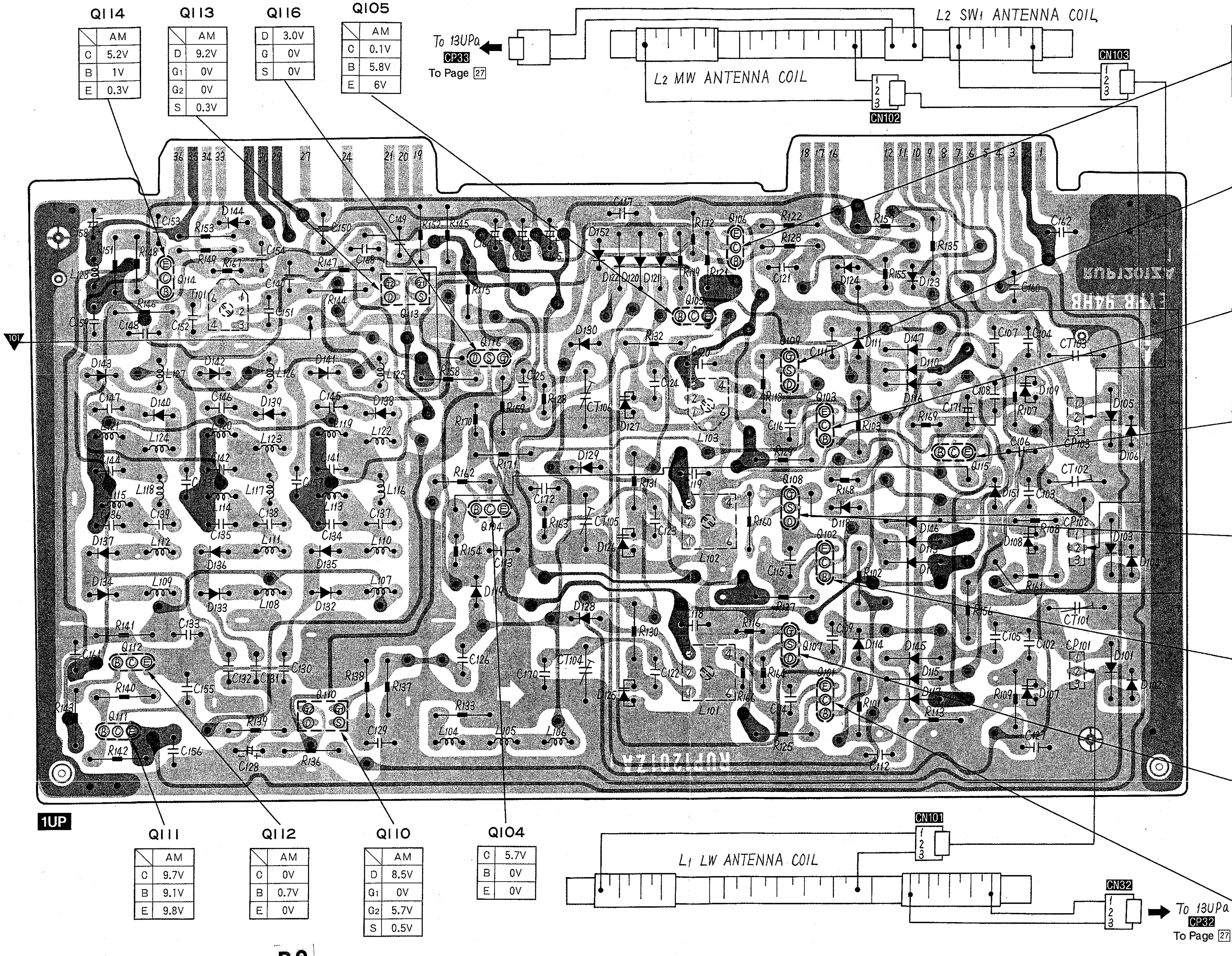
	AM
C	0V
B	0.7V
E	0V

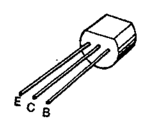
Q110

	AM
D	8.5V
G1	0V
G2	5.7V
S	0.5V

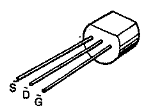
Q104

C	5.7V
B	0V
E	0V

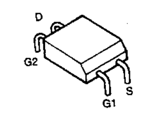

To 13UPa
CP33
To Page 27
L2 SW1 ANTENNA COIL
L2 MW ANTENNA COIL
CN103
CN102
CN101
L1 LW ANTENNA COIL
CN32
To 13UPa
CP32
To Page 27
1UP
101
Q114
Q113
Q116
Q105
Q106
Q109
Q103
Q115
Q108
Q102
Q107
Q101
Q111
Q112
Q110
Q104



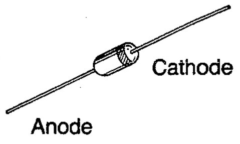
Q101~106, 111
112, 114, 115



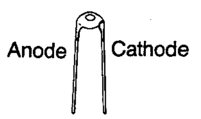
Q107~109, 116



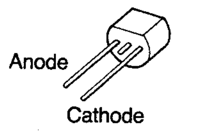
Q110, 113


Cathode
Anode

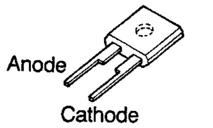
D101,103, 105,110~113,
115~117, 119~124, 132
~134, 141~147, 151, 152


Anode
Cathode

D102, 104, 106


Anode
Cathode

D111, 114, 118, 128~
130, 135~140


Anode
Cathode

D107~109, 125~127

6. FM/LW/MW/SW World-wide Receiver With Phase-Locked Loop Synthesizer BLOCK DIAGRAM-MODEL RF-9000

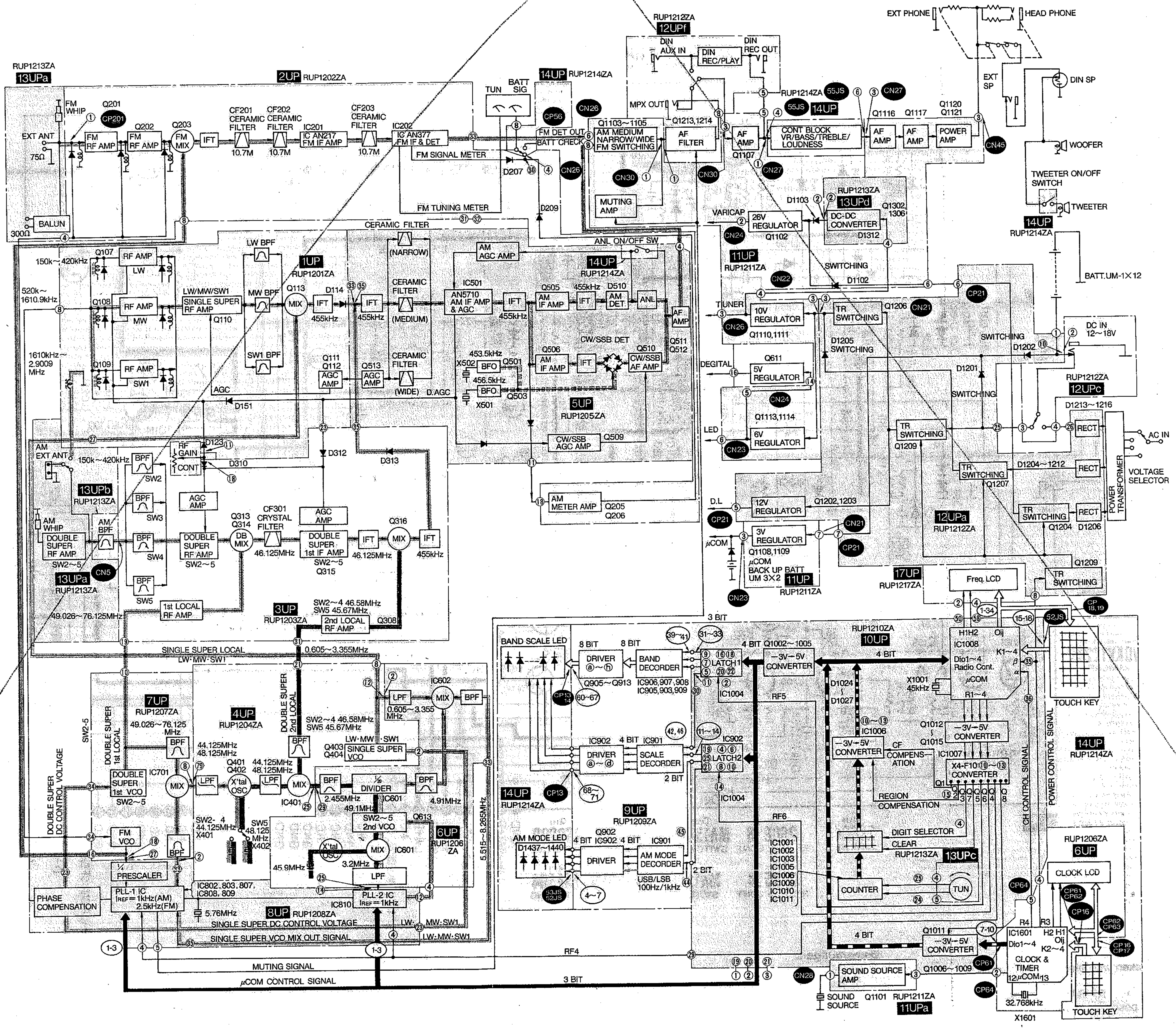
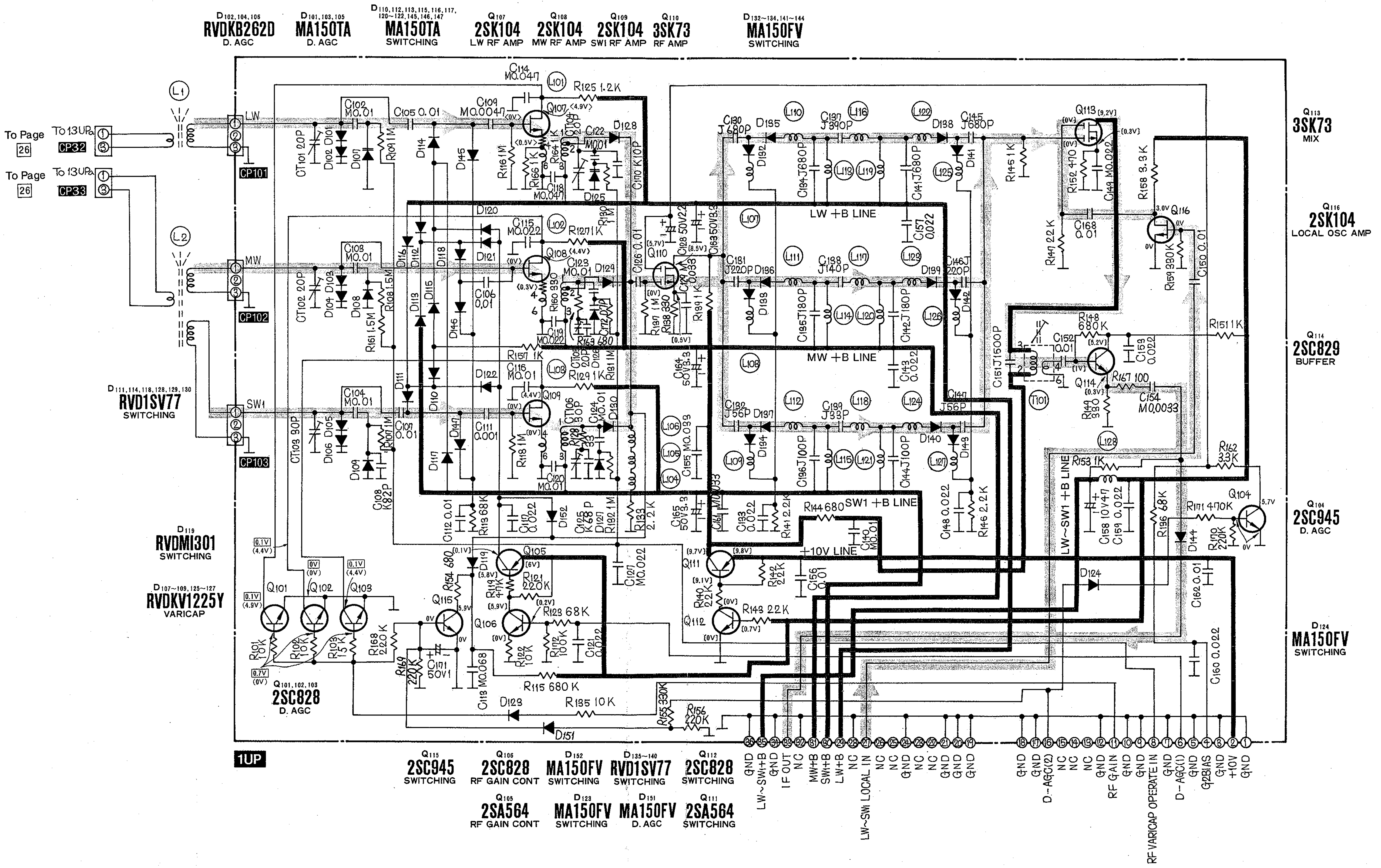

RUP1213ZA
13UPa
2UP RUP1202ZA
14UP RUP1214ZA
RUP1212ZA
12UPf
DIN AUX IN
DIN REC/PLAY
DIN REC OUT
EXT PHONE
HEAD PHONE
DIN SP
EXT SP
WOOFER
TWEETER ON/OFF SWITCH
TWEETER
FM WHIP
EXT ANT
75Ω
300Ω
BALUN
Q201
Q202
Q203
FM RF AMP
FM MIX
IFT
CF201 CERAMIC FILTER
CF202 CERAMIC FILTER
IC201
IC AN217 FM IF AMP
CF203 CERAMIC FILTER
IC202
IC AN377 FM IF & DET
10.7M
FM SIGNAL METER
FM TUNING METER
TUN
BATT SIG
FM DET OUT
BATT CHECK
MPX OUT
Q1103~1105
Q1213,1214
AM MEDIUM NARROW/WIDE FM SWITCHING
AF FILTER
AF AMP
Q1107
CONT BLOCK VR/BASS/TREBLE/LOUDNESS
Q1116
Q1117
Q1120 Q1121
POWER AMP
MUTING AMP
D207
D209
D1103
RUP1213ZA 13UPd
DC-DC CONVERTER
Q1302~1306
D1312
VARICAP
26V REGULATOR
Q1102
BATT UM-1×12
CERAMIC FILTER
LW BPF
1UP RUP1201ZA
Q107
RF AMP
LW
MW
SW1
150k~420kHz
520k~1610.9kHz
1610kHz~2.9009 MHz
Q108
Q109
LW/MW/SW1 SINGLE SUPER RF AMP
Q110
MW BPF
SW1 BPF
Q113
MIX
D114
IFT
455kHz
(NARROW)
(MEDIUM)
(WIDE)
Q111 Q112 AGC AMP
Q513 AGC AMP
D.AGC
AGC
D151
AM AGC AMP
IC501 AN5710 AM IF AMP & AGC
Q505
AM IF AMP
AM DET
ANL
ANL ON/OFF SW
14UP RUP1214ZA
D510
AF AMP
Q511 Q512
CW/SSB DET
453.5kHz
456.5kHz
X502
X501
BFO
Q501
Q503
Q506
Q510
CW/SSB AF AMP
5UP RUP1205ZA
CW/SSB AGC AMP
Q509
AM METER AMP
Q205 Q206
11UP RUP1211ZA
TUNER
10V REGULATOR
Q1110,1111
DEGITAL
5V REGULATOR
Q611
Q1113,1114
LED
6V REGULATOR
D.L
12V REGULATOR
Q1202,1203
μCOM
3V REGULATOR
Q1108,1109
μCOM BACK UP BATT UM 3×2
11UP RUP1211ZA
SWITCHING
D1102
TR SWITCHING
Q1206
D1205 SWITCHING
DC IN 12~18V
D1202
D1201
RUP1212ZA 12UPc
D1213~1216
RECT
AC IN
VOLTAGE SELECTOR
POWER TRANSFORMER
Q1209
Q1207
D1204~1212
Q1204
D1206
12UPa RUP1212ZA
17UP RUP1217ZA
Freq. LCD
AM EXT ANT
AM WHIP
RF GAIN CONT
D123
D310
D312
D313
BPF
SW2
SW3
SW4
SW5
AM BPF
DOUBLE SUPER RF AMP
13UPb RUP1213ZA
AGC AMP
Q313 Q314
DB MIX
CF301 CRYSTAL FILTER
46.125MHz
DOUBLE SUPER 1st IF AMP
SW2~5
Q315
Q316
49.026~76.125MHz
1st LOCAL RF AMP
3UP RUP1203ZA
SW2~4 46.58MHz
SW5 45.67MHz
2nd LOCAL RF AMP
Q308
SINGLE SUPER LOCAL
LW·MW·SW1
0.605~3.355MHz
7UP RUP1207ZA
4UP RUP1204ZA
DOUBLE SUPER 1st LOCAL
DOUBLE SUPER DC CONTROL VOLTAGE
DOUBLE SUPER 1st VCO
IC701
44.125MHz 48.125MHz
Q401 Q402
X'tal OSC
LPF
IC401
Q403 Q404
LW·MW·SW1 SINGLE SUPER VCO
IC602
½ DIVIDER
IC601
2.455MHz
49.1MHz
4.91MHz
SW2~5 2nd VCO
Q613
6UP RUP1206ZA
X401
X402
3.2MHz
45.9MHz
FM VCO
½ PRESCALER
PLL-1 IC IREF=1kHz(AM) 2.5kHz(FM)
IC802,803,807, IC808, 809
PHASE COMPENSATION
5.76MHz
8UP RUP1208ZA
PLL-2 IC IREF=1kHz
IC810
5.515~8.265MHz
SINGLE SUPER DC CONTROL VOLTAGE
SINGLE SUPER VCO MIX OUT SIGNAL
MUTING SIGNAL
μCOM CONTROL SIGNAL
3 BIT
RF4
BAND SCALE LED
8 BIT
DRIVER ⓐ~ⓗ
BAND DECORDER
Q905~Q913
IC906,907,908 IC905,903,909
LATCH1
4 BIT Q1002~1005
-3V~5V CONVERTER
RUP1210ZA 10UP
IC1004
RF5
D1024 D1027
IC1006
IC1007
CF COMPENSATION
REGION COMPENSATION
X4-F10 CONVERTER
IC902
SCALE DECORDER
LATCH2
2 BIT
14UP RUP1214ZA
9UP RUP1209ZA
AM MODE LED D1437~1440
Q902
IC901
AM MODE DECORDER
USB/LSB 100Hz/1kHz
RF6
IC1001 IC1002 IC1003 IC1005 IC1006 IC1009 IC1010 IC1011
DIGIT SELECTOR
CLEAR
RUP1213ZA 13UPc
COUNTER
TUN
H1H2
IC1008
Dlo1~4 Radio Cont.
μCOM
R1~4
K1~4
X1001 45kHz
Q1012~Q1015
TOUCH KEY
CH CONTROL SIGNAL
POWER CONTROL SIGNAL
14UP RUP1214ZA
RUP1206ZA 6UP
CLOCK LCD
Q1011
IC1601
CLOCK & TIMER 12μCOM
32.768kHz
X1601
SOUND SOURCE AMP
Q1006~1009
SOUND SOURCE
Q1101
RUP1211ZA 11UPa

Fig. 39

SCHEMATIC DIAGRAM (1 UP) . . . LW, MW, SW1—RF


D102, 104, 106 RVDKB262D D. AGC
D101, 103, 105 MA150TA D. AGC
D110, 112, 113, 115, 116, 117, 120~122, 145, 146, 147 MA150TA SWITCHING
Q107 2SK104 LW RF AMP
Q108 2SK104 MW RF AMP
Q109 2SK104 SW1 RF AMP
Q110 3SK73 RF AMP
D132~134, 141~144 MA150FV SWITCHING
Q113 3SK73 MIX
Q116 2SK104 LOCAL OSC AMP
Q114 2SC829 BUFFER
Q104 2SC945 D. AGC
D124 MA150FV SWITCHING
D111, 114, 118, 128, 129, 130 RVD1SV77 SWITCHING
D119 RVDMI301 SWITCHING
D107~109, 125~127 RVDKV1225Y VARICAP
Q101, 102, 103 2SC828 D. AGC
Q115 2SC945 SWITCHING
Q106 2SC828 RF GAIN CONT
D152 MA150FV SWITCHING
D135~140 RVD1SV77 SWITCHING
Q112 2SC828 SWITCHING
Q105 2SA564 RF GAIN CONT
D123 MA150FV SWITCHING
D151 MA150FV D. AGC
Q111 2SA564 SWITCHING
To Page 26 To 13UP CP32
To Page 26 To 13UP CP33
L1
L2
LW
MW
SW1
CP101
CP102
CP103
LW +B LINE
MW +B LINE
SW1 +B LINE
+10V LINE
LW~SW1 +B LINE
T101
1UP
GND
LW~SW1+B
GND
IF OUT
NC
MW+B
SW1+B
LW+B
NC
LW~SW1 LOCAL IN
NC
NC
NC
NC
GND
GND
GND
GND
GND
D-AGC(2)
NC
NC
NC
GND
RF GAIN
GND
GND
RF VARICAP OPERATE IN
GND
D-AGC(1)
GND
G2BIAS
+10V
GND

Note:

1. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
   ▭ . . . RF GAIN MIN position, ( ) . . . RF GAIN MAX position,
   ‹ › . . . LW position, « » . . . MW position,
   [ ] . . . SW1 position. ⟦ ⟧ . . . AM position.

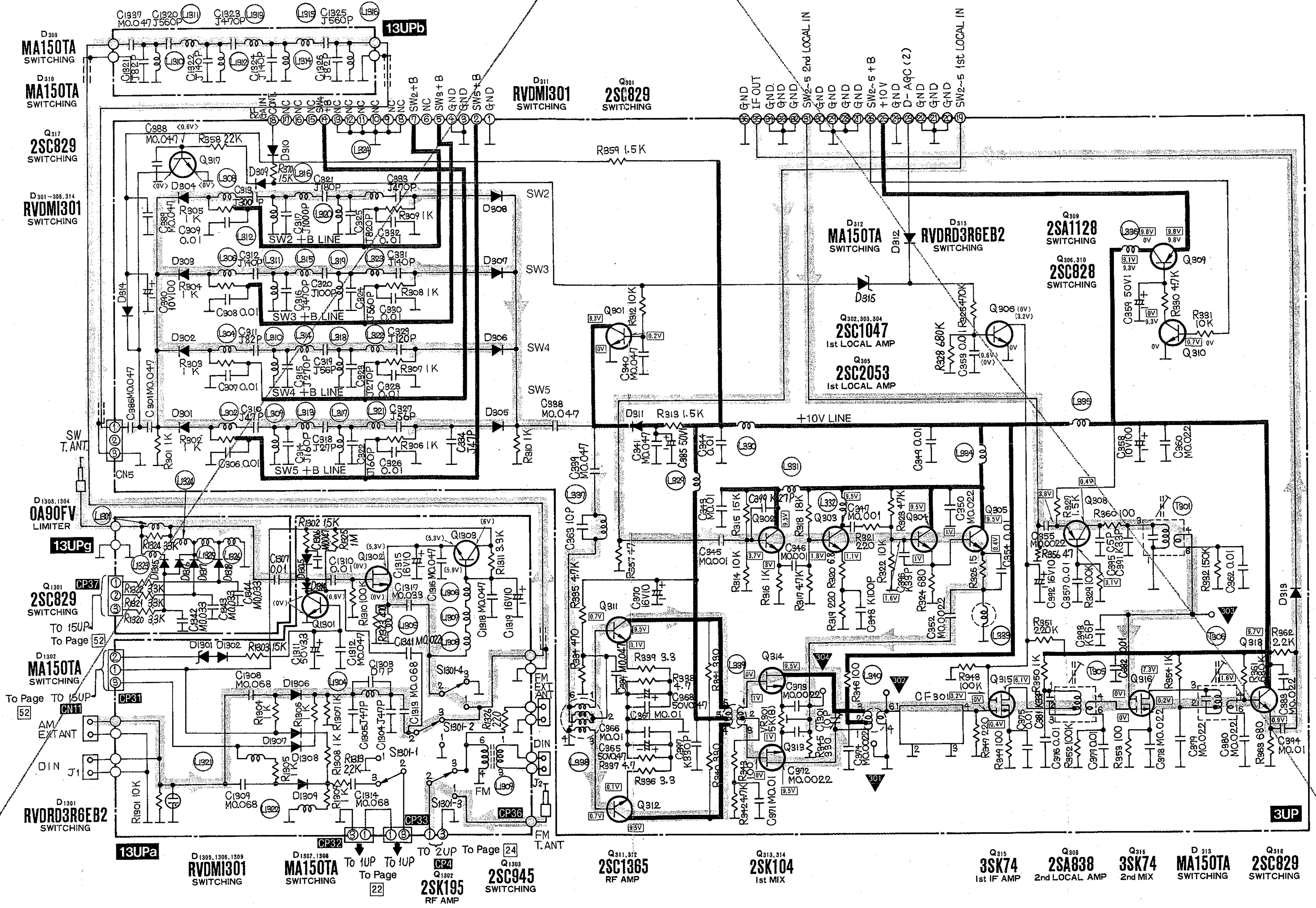
Bemerkungen:

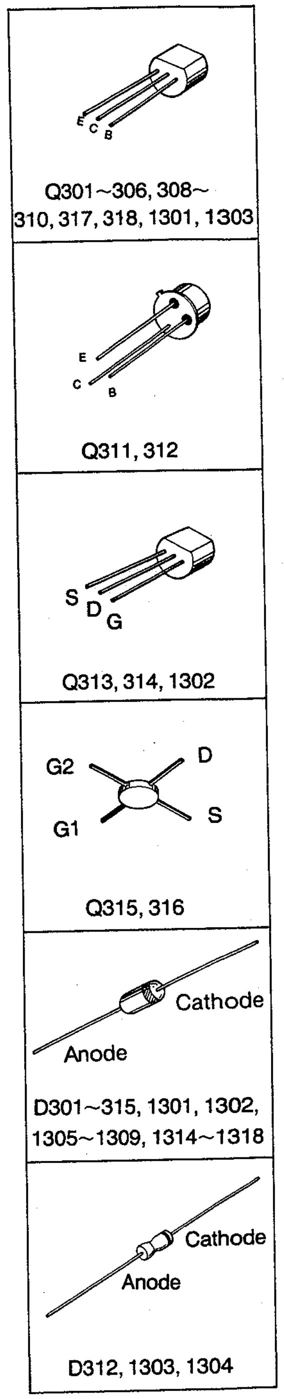
1. Alle Gleichspannungen sind mit einem Elektronikvoltmeter vom negativen Batterieanschluß aus zu messen.
   ▭ . . . HF-Verstärkungsregler auf „MIN"
   ( ) . . . HF-Verstärkungsregler auf „MAX"
   ‹ › . . . Stellung „LW", « » . . . Stellung „MW",
   [ ] . . . Stellung „KW 1". ⟦ ⟧ . . . Stellung „AM".

Remarque:

1. La tension c.c. est mesurée au moyen d'un voltmétre électronique à partir de la borne négative de la pile.
   ▭ . . . Position "MIN" de la commande de gain HF (RF GAIN),
   ( ) . . . Position "MAX" de la commande de gain HF (RF GAIN),
   ‹ › . . . Position GO, « » . . . Position PO,
   [ ] . . . Position OC1, ⟦ ⟧ . . . Position AM.

SCHEMATIC DIAGRAM (3 UP, 13 UPa, b) . . . SW2~5 BPF, RF—IF & ANTENNA CIRCUIT


13UPb
13UPg
13UPa
3UP
D309 MA150TA SWITCHING
D310 MA150TA SWITCHING
Q317 2SC829 SWITCHING
D301~308, 314 RVDMI301 SWITCHING
D311 RVDMI301 SWITCHING
Q301 2SC829 SWITCHING
D312 MA150TA SWITCHING
D313 RVDRD3R6EB2 SWITCHING
Q309 2SA1128 SWITCHING
Q306, 310 2SC828 SWITCHING
Q302, 303, 304 2SC1047 1st LOCAL AMP
Q305 2SC2053 1st LOCAL AMP
D1303, 1304 OA90FV LIMITER
Q1301 2SC829 SWITCHING
D1302 MA150TA SWITCHING
D1301 RVDRD3R6EB2 SWITCHING
D1305, 1306, 1309 RVDMI301 SWITCHING
D1307, 1308 MA150TA SWITCHING
Q1302 2SK195 RF AMP
Q1303 2SC945 SWITCHING
Q311, 312 2SC1365 RF AMP
Q313, 314 2SK104 1st MIX
Q315 3SK74 1st IF AMP
Q308 2SA838 2nd LOCAL AMP
Q316 3SK74 2nd MIX
D313 MA150TA SWITCHING
Q318 2SC829 SWITCHING
SW2
SW3
SW4
SW5
SW2 +B LINE
SW3 +B LINE
SW4 +B LINE
SW5 +B LINE
+10V LINE
SW T.ANT
CN5
To 15UP To Page 52
To Page TO 15UP 52
AM EXT ANT
DIN J1
FM EXT ANT
FM T.ANT
To 1UP To 1UP To Page 22
TO 2UP To Page 24
CF301
GND
1F OUT
SW2~5 2nd LOCAL IN
SW2~5+B
+10V
D-AGC (2)
SW2~5 1st LOCAL IN


E
C
B
Q301~306, 308~310, 317, 318, 1301, 1303
Q311, 312
S
D
G
Q313, 314, 1302
G2
G1
D
S
Q315, 316
Cathode
Anode
D301~315, 1301, 1302, 1305~1309, 1314~1318
D312, 1303, 1304

Notes:

1. S1301-1~1301-4: Antenna selector switch in "EXT ANT" position.
   (1 . . . INT ANT, 3 . . . EXT ANT)
2. The mark (▼) shows test point, e.g. ▼ =test point 1.
3. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
   ▭ . . . SW2~SW5 position, 《 》 . . . SW2~SW5 AGC OFF position.
   ( ) . . . SW2~SW5 AGC ON position, [ ] . . . SW2~SW5 INT ANT position.
   〈 〉 . . . SW2~SW5 RF GAIN ON "MIN" position
4. VR301 . . . 1st Local carrier leak adjustment.

Bemerkungen:

1. S1301-1~1301-4: Antennenwahlschalter auf „Außenantenne"
   (1 . . . Geräteantenne, 3 . . . Außenantenne)
2. Die Markierung (▼) bezeichnet einen Meßpunkt, z.B:▼ = Meßpunkt 1.
3. Alle Gleichspannungen sind mit einem Elektronikvoltmeter vom negativen Batterieanschluß aus zu messen.
   ▭ . . . Stellung „KW2~KW5", 《 》 . . . Stellung „KW2~KW5" automatische Verstärkungsregelung AUS.
   ( ) . . . Stellung „KW2~KW5" automatische Verstärkungsregelung EIN.
   〈 〉 . . . Stellung „KW2~KW5" HF-Verstärkung Minimal Position.
   [ ] . . . Stellung „KW2~KW5" Geräteantenne.
4. VR301 . . . RW zur Trägerrest-Einstellung des 1. Überlagerers.

Remarques:

1. S1301-1~1301-4: Commutateur de sélecteur d'antenne en position "EXT ANT"
   (1 . . . ANTENNE INTERIEURE,
   3 . . . ANTENNE EXTERIEURE)
2. La marque (▼) signale un point de vérification. EX.: ▼ =point de vérification 1.
3. La tension c.c. est mesurée au moyen d'un voltmétre électronique à partir de la borne négative de la pile.
   ▭ . . . Position OC2~OC5, 《 》 . . . Anti-fading en position "OFF" (AGC OFF) OC2~OC5.
   ( ) . . . Anti-fading en position "ON" (AGC ON) OC2~OC5
   〈 〉 . . . Gain HF en position "MIN" OC2~OC5. [ ] . . . Position "ANTENNE INTERIEURE" OC2~OC5.
4. VR301: Réglage de dispersion de la première onde porteuse locale.

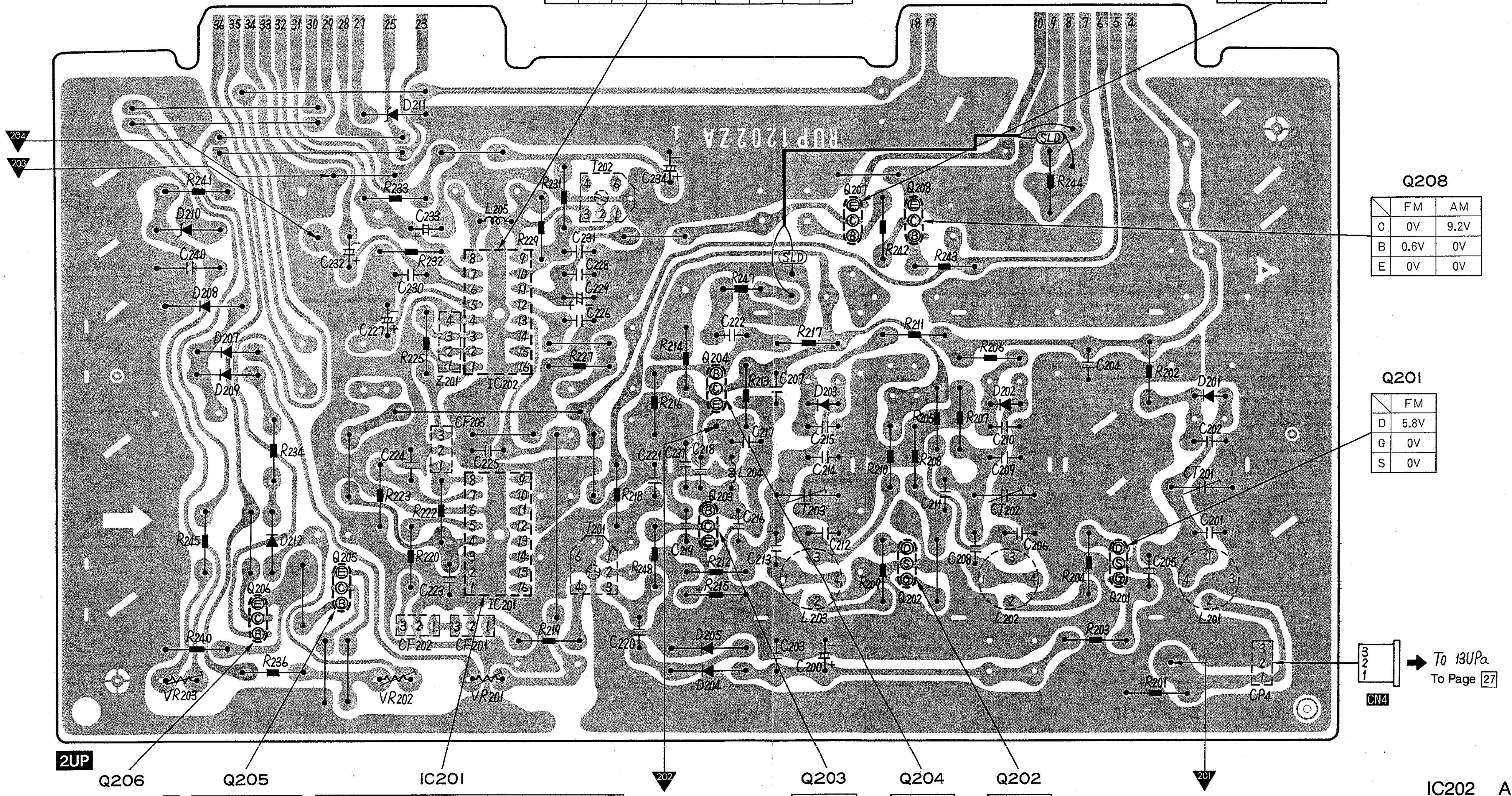
CIRCUIT BOARD WIRING VIEW (2 UP) . . . FM RF IF DET & METER CIRCUIT

IC202

	1	2	3	4	5	6	7	8
FM	2.1V	2.1V	2.1V	0V	0.4V	6V	5.4V	5.7V
	9	10	11	12	13	14	15	16
FM	5.7V	5.8V	9.8V	4.5V	0V	0V	5.1V	0V

Q207

	FM	AM
C	9.8V	0V
B	9.2V	9.8V
E	9.8V	9.8V

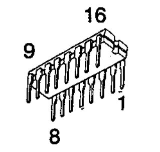

36 35 34 33 32 31 30 29 28 27 25 23
18 17
10 9 8 7 6 5 4
RUP12022A 1
204
203
D211
R241
D210
C240
D208
D207
D209
R234
R245
D212
Q206
Q205
R240
R236
VR203
VR202
VR201
R233
C233
C232
R232
C230
C227
R225
Z201
IC202
L205
R231
T202
C234
C231
R229
C228
C224
C226
R227
CF203
C224
C225
R223
R222
R220
C223
IC201
CF202
CF201
R219
T201
R248
C220
R218
R214
R216
Q204
R213
C207
C222
R217
R247
SLD
Q207
Q208
R242
R243
R244
R211
R206
C204
R202
D201
D203
D202
C217
C215
C214
R205
R207
C210
C209
R210
R208
C221
C237
C218
L204
CT203
Q203
C216
C219
R212
R215
C213
C212
L203
C211
CT202
C206
C208
L202
R209
Q202
R204
Q201
C205
CT201
C201
C202
L201
D205
D204
C203
C200
R203
R201
CP4
A
2UP
202
201
CN4
To 13UPa
To Page 27

Q208

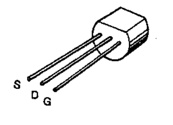
	FM	AM
C	0V	9.2V
B	0.6V	0V
E	0V	0V

Q201

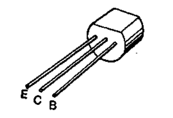
	FM
D	5.8V
G	0V
S	0V



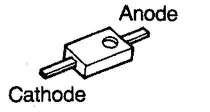
IC201, 202



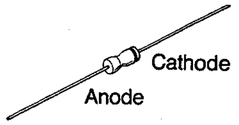
Q201, 202



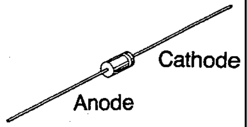
Q203~208


Anode
Cathode

D201, 202, 203


Cathode
Anode

D204, 205


Cathode
Anode

D207~D212

Q206

	FM	AM
C	0V	6.1V
B	0V	0.3V
E	0V	0V

Q205

	FM	AM
C	0V	0V
B	0V	0.1V
E	0V	0.9V

IC201

	1	2	3	4	5	6	7	8
FM	0V	0V	0V	6.1V	1V	0V	1V	6V

Q203

	FM
C	5.9V
B	1.1V
E	0.4V

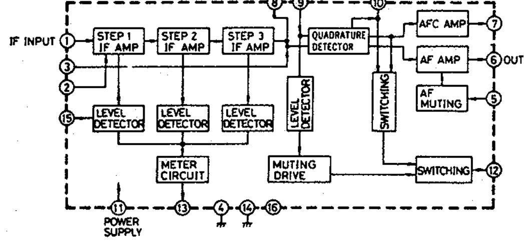
Q204

	FM
C	6.1V
B	2.6V
E	1.8V

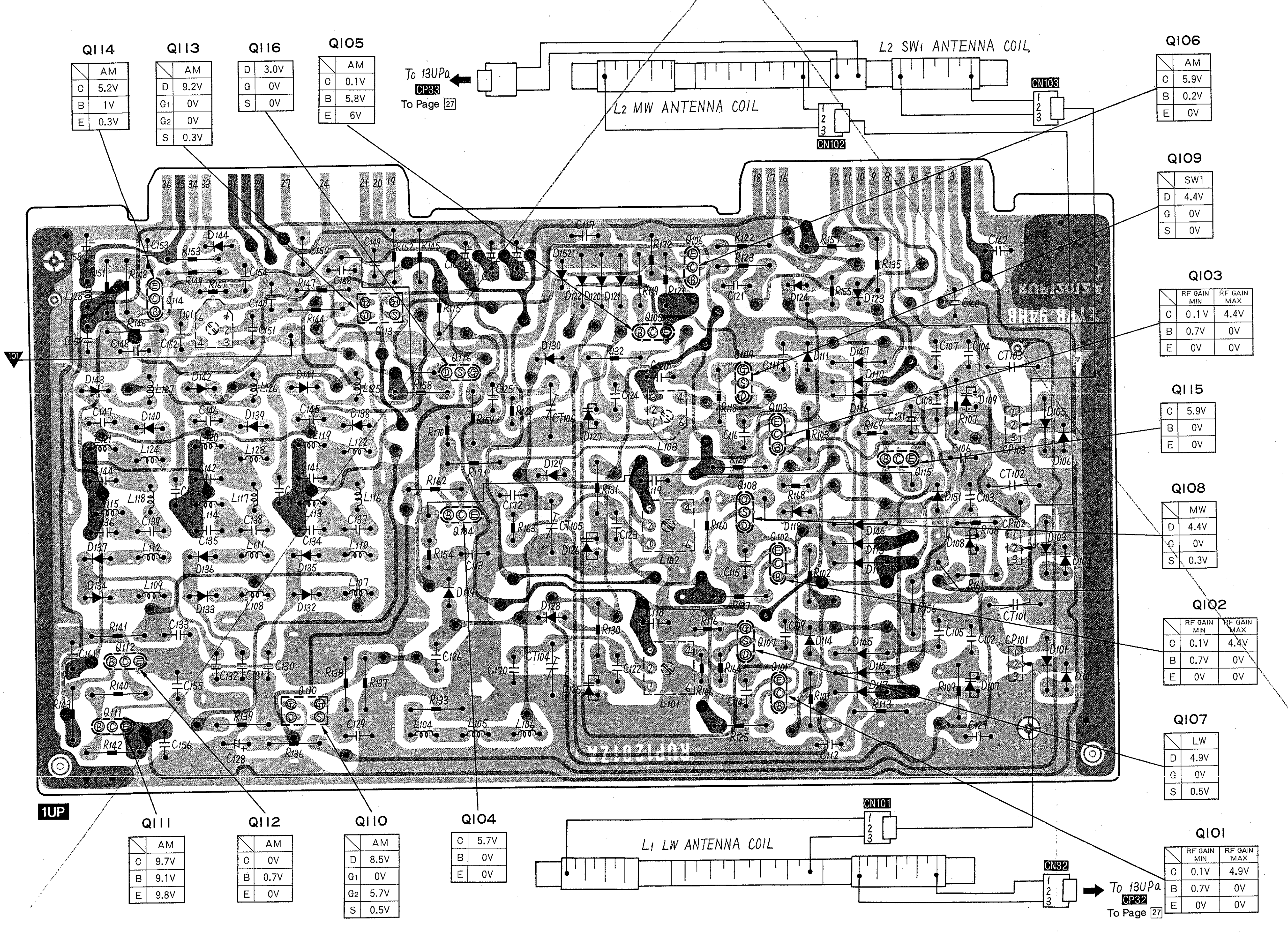
Q202

	FM
D	5.8V
G	0V
S	0V

IC202 AN377SD


IFT
IF INPUT
STEP 1 IF AMP
STEP 2 IF AMP
STEP 3 IF AMP
QUADRATURE DETECTOR
AFC AMP
AF AMP
OUTPUT
AF MUTING
LEVEL DETECTOR
LEVEL DETECTOR
LEVEL DETECTOR
LEVEL DETECTOR
SWITCHING
METER CIRCUIT
MUTING DRIVE
SWITCHING
POWER SUPPLY
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
⑭
⑮
⑯

CIRCUIT BOARD WIRING VIEW (1 UP) . . . LW, MW, SW1—RF CIRCUIT


L2 SW1 ANTENNA COIL
L2 MW ANTENNA COIL
L1 LW ANTENNA COIL
To 13UPa
CP33
To Page 27
CN103
CN102
CN101
CN32
To 13UPa
CP32
To Page 27
1UP
RUP1201ZA

Q114

	AM
C	5.2V
B	1V
E	0.3V

Q113

	AM
D	9.2V
G1	0V
G2	0V
S	0.3V

Q116

D	3.0V
G	0V
S	0V

Q105

	AM
C	0.1V
B	5.8V
E	6V

Q106

	AM
C	5.9V
B	0.2V
E	0V

Q109

	SW1
D	4.4V
G	0V
S	0V

Q103

	RF GAIN MIN	RF GAIN MAX
C	0.1V	4.4V
B	0.7V	0V
E	0V	0V

Q115

C	5.9V
B	0V
E	0V

Q108

	MW
D	4.4V
G	0V
S	0.3V

Q102

	RF GAIN MIN	RF GAIN MAX
C	0.1V	4.4V
B	0.7V	0V
E	0V	0V

Q107

	LW
D	4.9V
G	0V
S	0.5V

Q101

	RF GAIN MIN	RF GAIN MAX
C	0.1V	4.9V
B	0.7V	0V
E	0V	0V

Q111

	AM
C	9.7V
B	9.1V
E	9.8V

Q112

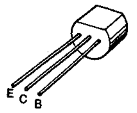
	AM
C	0V
B	0.7V
E	0V

Q110

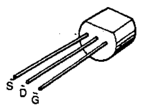
	AM
D	8.5V
G1	0V
G2	5.7V
S	0.5V

Q104

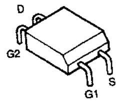
C	5.7V
B	0V
E	0V



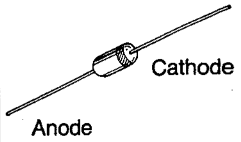
Q101~106, 111
112, 114, 115



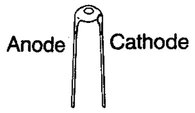
Q107~109, 116



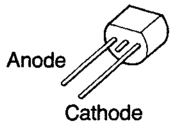
Q110, 113


Cathode
Anode

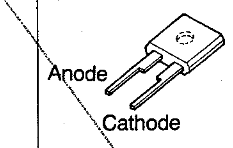
D101,103, 105,110~113, 115~117, 119~124, 132 ~134, 141~147, 151, 152


Anode
Cathode

D102, 104, 106

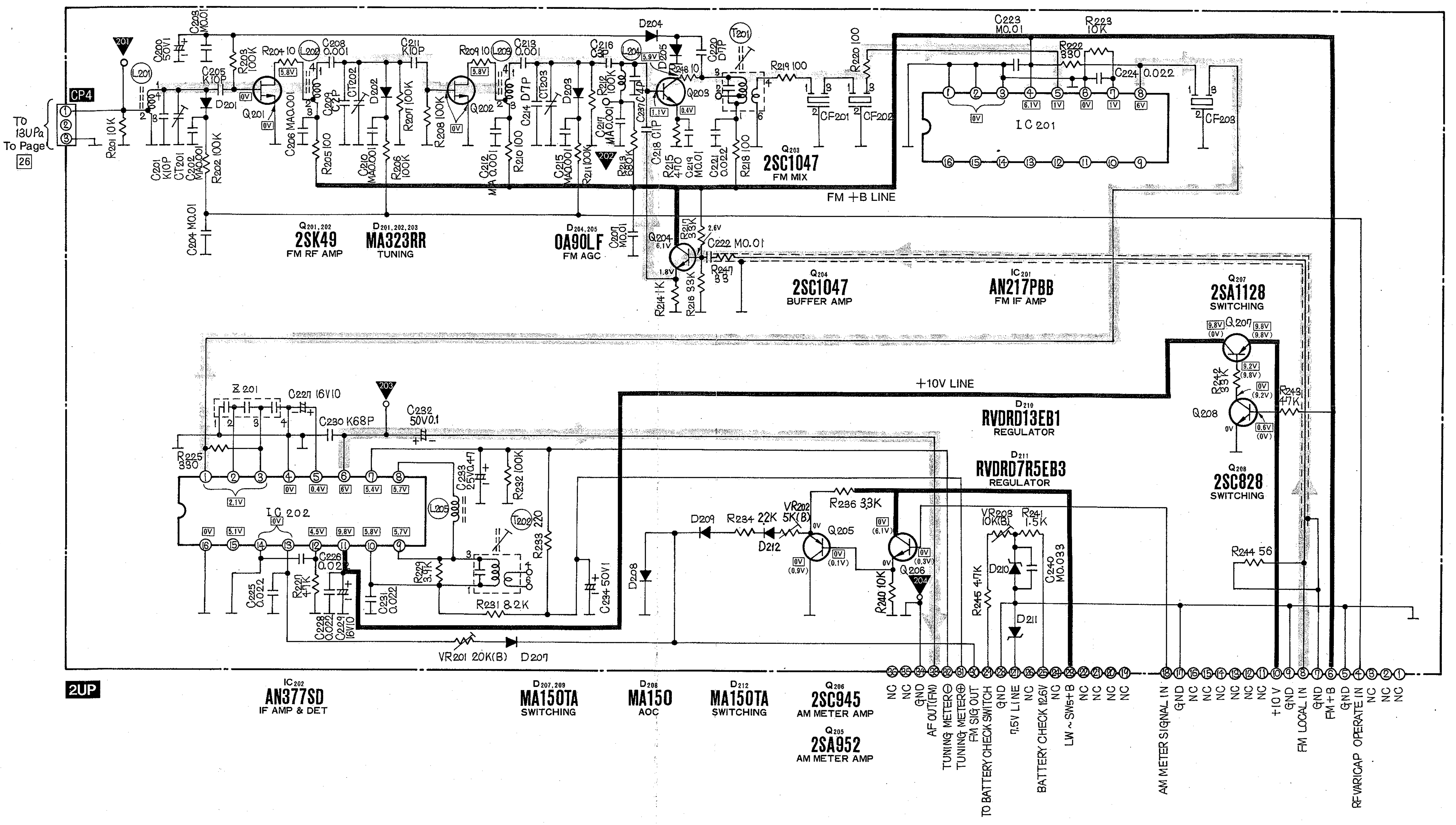

Anode
Cathode

D111, 114, 118, 128~130, 135~140


Anode
Cathode

D107~109, 125~127

SCHEMATIC DIAGRAM (2 UP) . . . FM RF IF DET & METER CIRCUIT

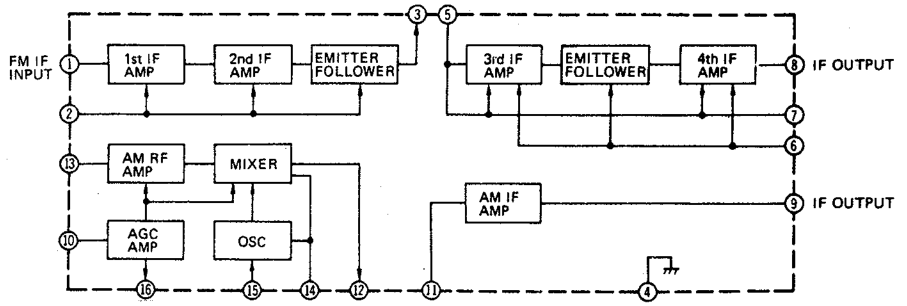

CP4
To 13UPa
To Page 26
R201 10K
C200 50V1
C203 M0.01
C205 K10P
D201
R203 100K
Q201
R204 10
L202
C208 0.001
C206 MA0.001
C209 C2P
CT202
D202
R207 100K
R208 100K
R205 100
C210 MA0.001
R206 100K
C211 K10P
R209 10
L203
C213 0.001
Q202
C214 D7P
CT203
D203
R212 100K
C212 MA0.001
R210 100
C215 MA0.001
R211 100K
C216 C3P
L204
D204
D205
R218 10
Q203
C217 MA0.001
R213 680K
C237 C1P
C218 C1P
R215 470
C219 M0.01
C220 D7P
T201
R219 100
R220 100
C221 0.022
R218 100
CF201
CF202
CF203
C223 M0.01
R223 10K
R222 330
C224 0.022
IC 201
L201
C201 K10P
CT201
C202 MA0.001
R202 100K
C204 M0.01
Q201, 202 2SK49 FM RF AMP
D201, 202, 203 MA323RR TUNING
D204, 205 OA90LF FM AGC
C207 M0.01
Q204
R217 33K
C222 M0.01
R247 33
R214 1K
R216 33K
Q203 2SC1047 FM MIX
FM +B LINE
Q204 2SC1047 BUFFER AMP
IC201 AN217PBB FM IF AMP
Q207 2SA1128 SWITCHING
Q207
R242 33K
R243 47K
Q208
+10V LINE
D210 RVDRD13EB1 REGULATOR
D211 RVDRD7R5EB3 REGULATOR
Q208 2SC828 SWITCHING
Z 201
C227 16V10
C230 K68P
C232 50V0.1
R225 330
IC 202
L205
C233 25V0.47
R232 100K
T202
R233 220
C226 0.022
C225 0.022
R221 4.7K
C228 0.022
C229 16V10
C231 0.022
R229 3.9K
R231 8.2K
C234 50V1
D208
D209
R234 22K
VR202 5K(B)
D212
R236 33K
Q205
Q206
R240 10K
VR203 10K(B)
R241 1.5K
R245 4.7K
D210
C240 M0.033
D211
R244 56
VR201 20K(B)
D207
2UP
IC202 AN377SD IF AMP & DET
D207, 209 MA150TA SWITCHING
D208 MA150 AOC
D212 MA150TA SWITCHING
Q206 2SC945 AM METER AMP
Q205 2SA952 AM METER AMP
NC
NC
GND
AF OUT(FM)
TUNING METER⊖
TUNING METER⊕
FM SIG OUT
TO BATTERY CHECK SWITCH
GND
7.5V LINE
NC
BATTERY CHECK 12.6V
NC
LW ~ SW5+B
NC
NC
NC
NC
AM METER SIGNAL IN
GND
NC
NC
NC
NC
NC
NC
+10 V
GND
FM LOCAL IN
GND
FM +B
GND
RF VARICAP OPERATE IN
NC
NC
NC

Notes:
1. The mark (▼) shows test point, e.g. ▼=test point 1.
2. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
   ☐ . . . FM position, ( ) . . . AM position.
3. VR201 . . . FM signal meter adjustment, VR202 . . . AM signal meter adjustment, VR203 . . . Battery check adjustment.

Bemerkungen:
1. Die Markierung (▼) bezeichnet einen Meßpunkt, z.B: ▼= Meßpunkt 1.
2. Alle Gleichspannungen sind mit einem Elektronikvoltmeter vom negativen Batterieanschluß aus zu messen.
   ☐ . . . Stellung „UKW", ( ) . . . Stellung „AM".
3. VR201 . . . RW zur Einstellung der FM-Signalstärkeanzeige.
   VR202 . . . RW zur Einstellung der AM-Signalstärkeanzeige.
   VR203 . . . RW zur Einstellung der Batterieanzeige.

Remarques:
1. La marque (▼) signale un point de vérification. EX.: ▼ =point de vérification 1.
2. La tension c.c. est mesurée au moyen d'un voltmétre électronique à partir de la borne négative de la pile.
   ☐ Position FM, ( ) . . . Position AM.
3. VR201 . . . Réglage du Vu-mètre de signal FM,
   VR202 . . . Réglage du Vu-mètre de signal AM,
   VR203 . . . Commande de vérification des piles.

IC201 AN217PBB


FM IF INPUT
1st IF AMP
2nd IF AMP
EMITTER FOLLOWER
3rd IF AMP
EMITTER FOLLOWER
4th IF AMP
IF OUTPUT
AM RF AMP
MIXER
AGC AMP
OSC
AM IF AMP
IF OUTPUT

C1

C2

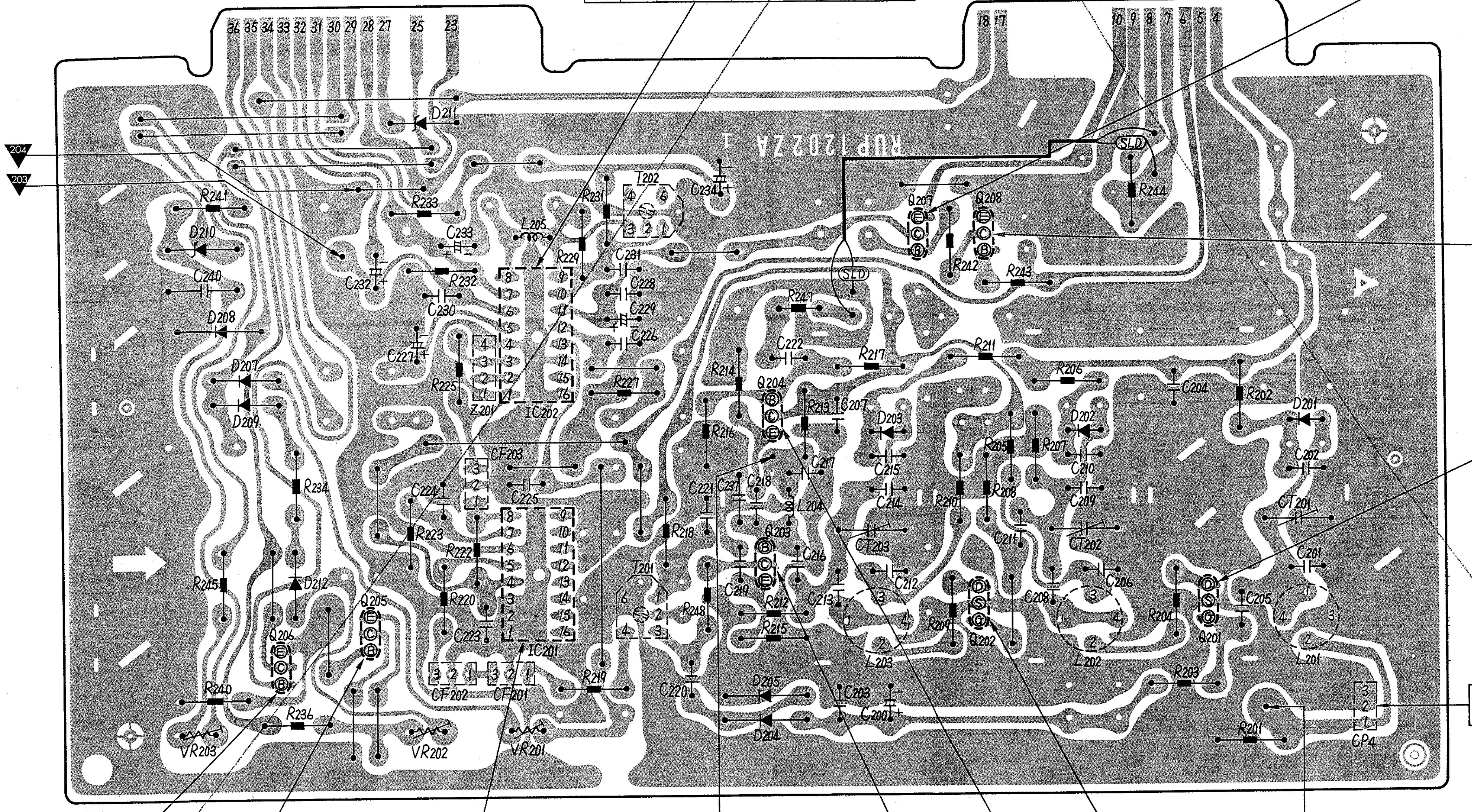
CIRCUIT BOARD WIRING VIEW (2 UP) . . . FM RF IF DET & METER CIRCUIT

IC202

	1	2	3	4	5	6	7	8
FM	2.1V	2.1V	2.1V	0V	0.4V	6V	5.4V	5.7V
	9	10	11	12	13	14	15	16
FM	5.7V	5.8V	9.8V	4.5V	0V	0V	5.1V	0V

Q207

	FM	AM
C	9.8V	0V
B	9.2V	9.8V
E	9.8V	9.8V

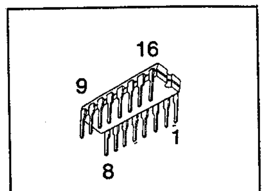

36 35 34 33 32 31 30 29 28 27 25 23
18 17
10 9 8 7 6 5 4
RUP1202ZA 1
204
203
D211
T202
C234
R231
R233
R241
D210
C233
L205
C231
R229
C232
C240
R232
C228
C230
C229
D208
C226
C227
R225
R227
D207
D209
Z201
IC202
SLD
Q207
Q208
R244
R242
R243
R241
C222
R217
R211
R206
C204
R202
D201
R214
Q204
R219
C207
D203
D202
R216
R205
R207
C215
C210
C202
CF203
C217
C224
C225
C221
C237
C218
L204
C214
R210
R208
C209
CT201
R234
R223
R218
Q203
CT203
C211
CT202
R222
C216
C201
R245
D212
Q205
R220
T201
C219
R212
C212
C213
C206
C208
C205
R248
R204
Q206
C223
IC201
R215
R209
Q202
Q201
L203
L202
L201
CF202
CF201
R219
R203
R240
D205
C203
C220
C200
R236
D204
R201
VR203
VR202
VR201
CP4
CN4
To 13UPa
To Page 27
2UP

Q208

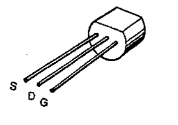
	FM	AM
C	0V	9.2V
B	0.6V	0V
E	0V	0V

Q201

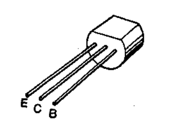
	FM
D	5.8V
G	0V
S	0V



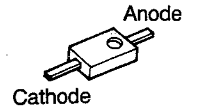
IC201, 202



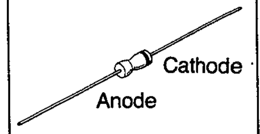
Q201, 202



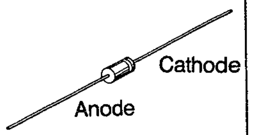
Q203~208


Anode
Cathode

D201, 202, 203


Cathode
Anode

D204, 205


Cathode
Anode

D207~D212

Q206

	FM	AM
C	0V	6.1V
B	0V	0.3V
E	0V	0V

Q205

	FM	AM
C	0V	0V
B	0V	0.1V
E	0V	0.9V

IC201

	1	2	3	4	5	6	7	8
FM	0V	0V	0V	6.1V	1V	0V	1V	6V

Q203

	FM
C	5.9V
B	1.1V
E	0.4V

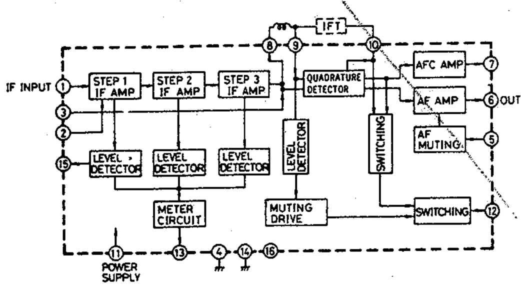
Q204

	FM
C	6.1V
B	2.6V
E	1.8V

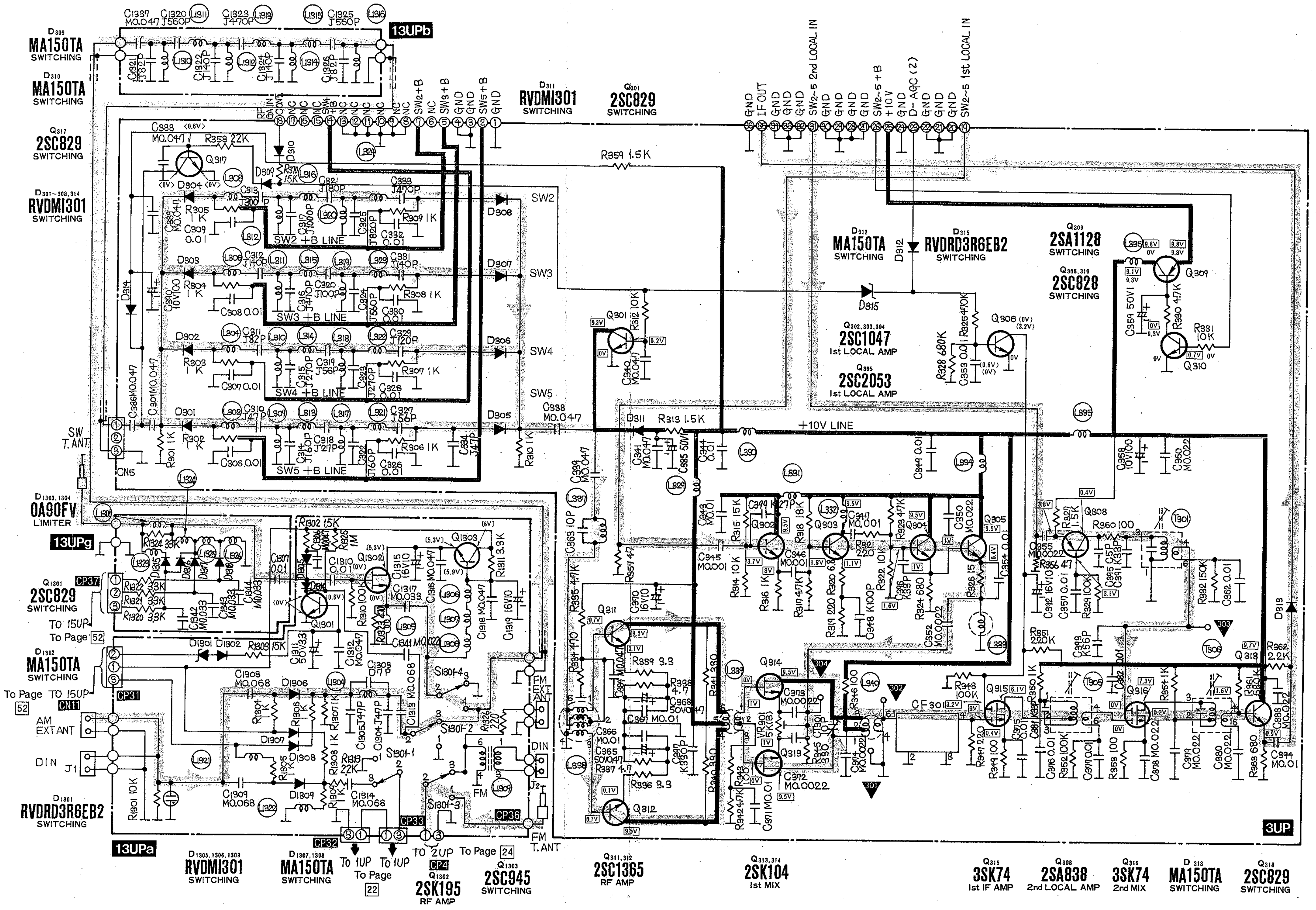
Q202

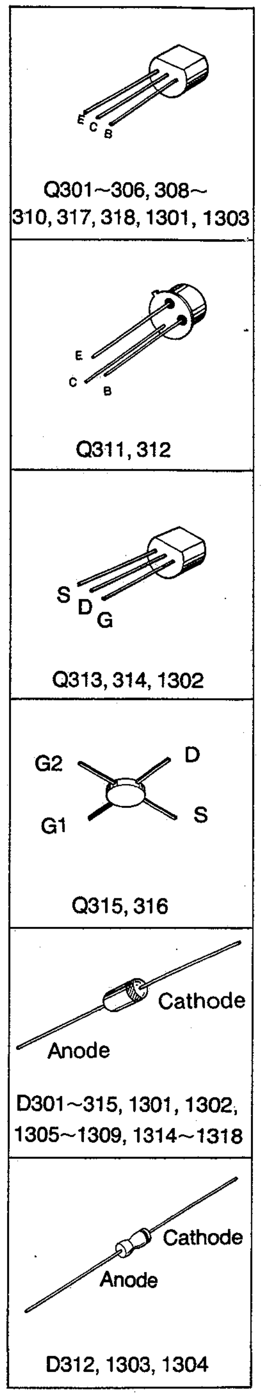
	FM
D	5.8V
G	0V
S	0V

IC202 AN377SD


IFT
8
9
10
IF INPUT
1
3
2
15
STEP 1 IF AMP
STEP 2 IF AMP
STEP 3 IF AMP
QUADRATURE DETECTOR
AFC AMP
7
AF AMP
6
OUTPUT
AF MUTING
5
LEVEL DETECTOR
LEVEL DETECTOR
LEVEL DETECTOR
LEVEL DETECTOR
SWITCHING
METER CIRCUIT
MUTING DRIVE
SWITCHING
12
11
POWER SUPPLY
13
4
14
16

SCHEMATIC DIAGRAM (3 UP, 13 UPa, b) . . . SW2~5 BPF, RF—IF & ANTENNA CIRCUIT


D309 MA150TA SWITCHING
D310 MA150TA SWITCHING
Q317 2SC829 SWITCHING
D301~308, 314 RVDMI301 SWITCHING
D1303, 1304 OA90FV LIMITER
Q1301 2SC829 SWITCHING
D1302 MA150TA SWITCHING
D1301 RVDRD3R6EB2 SWITCHING
D311 RVDMI301 SWITCHING
Q301 2SC829 SWITCHING
D312 MA150TA SWITCHING
D315 RVDRD3R6EB2 SWITCHING
Q309 2SA1128 SWITCHING
Q306, 310 2SC828 SWITCHING
Q302, 303, 304 2SC1047 1st LOCAL AMP
Q305 2SC2053 1st LOCAL AMP
D1305, 1306, 1309 RVDMI301 SWITCHING
D1307, 1308 MA150TA SWITCHING
Q1302 2SK195 RF AMP
Q1303 2SC945 SWITCHING
Q311, 312 2SC1365 RF AMP
Q313, 314 2SK104 1st MIX
Q315 3SK74 1st IF AMP
Q308 2SA838 2nd LOCAL AMP
Q316 3SK74 2nd MIX
D313 MA150TA SWITCHING
Q318 2SC829 SWITCHING
13UPa
13UPb
13UPg
3UP
SW2
SW3
SW4
SW5
SW2 +B LINE
SW3 +B LINE
SW4 +B LINE
SW5 +B LINE
+10V LINE
SW T.ANT
AM EXT ANT
DIN J1
FM EXT ANT
FM T.ANT
CN5
CN11
CP31
CP32
CP33
CP36
CP37
CP4
CF301
VR301
To Page 22
To Page 24
To Page 52
TO 15UP
To 1UP
TO 2UP
GND
1F OUT
SW2~5 2nd LOCAL IN
SW2~5+B
+10V
D-AGC (2)
SW2~5 1st LOCAL IN
RF GAIN
SW2+B
SW3+B
SW4+B
SW5+B
NC


E
C
B
Q301~306, 308~310, 317, 318, 1301, 1303
E
C
B
Q311, 312
S
D
G
Q313, 314, 1302
G2
D
G1
S
Q315, 316
Cathode
Anode
D301~315, 1301, 1302, 1305~1309, 1314~1318
Cathode
Anode
D312, 1303, 1304

Notes:

1. S1301-1~1301-4: Antenna selector switch in "EXT ANT" position.
   (1 . . . INT ANT, 3 . . . EXT ANT)
2. The mark (▼) shows test point, e.g. ▼ =test point 1.
3. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
   ▭ . . . SW2~SW5 position, 《 》 . . . SW2~SW5 AGC OFF position.
   ( ) . . . SW2~SW5 AGC ON position, [ ] . . . SW2~SW5 INT ANT position.
   〈 〉 . . . SW2~SW5 RF GAIN ON "MIN" position
4. VR301 . . . 1st Local carrier leak adjustment.

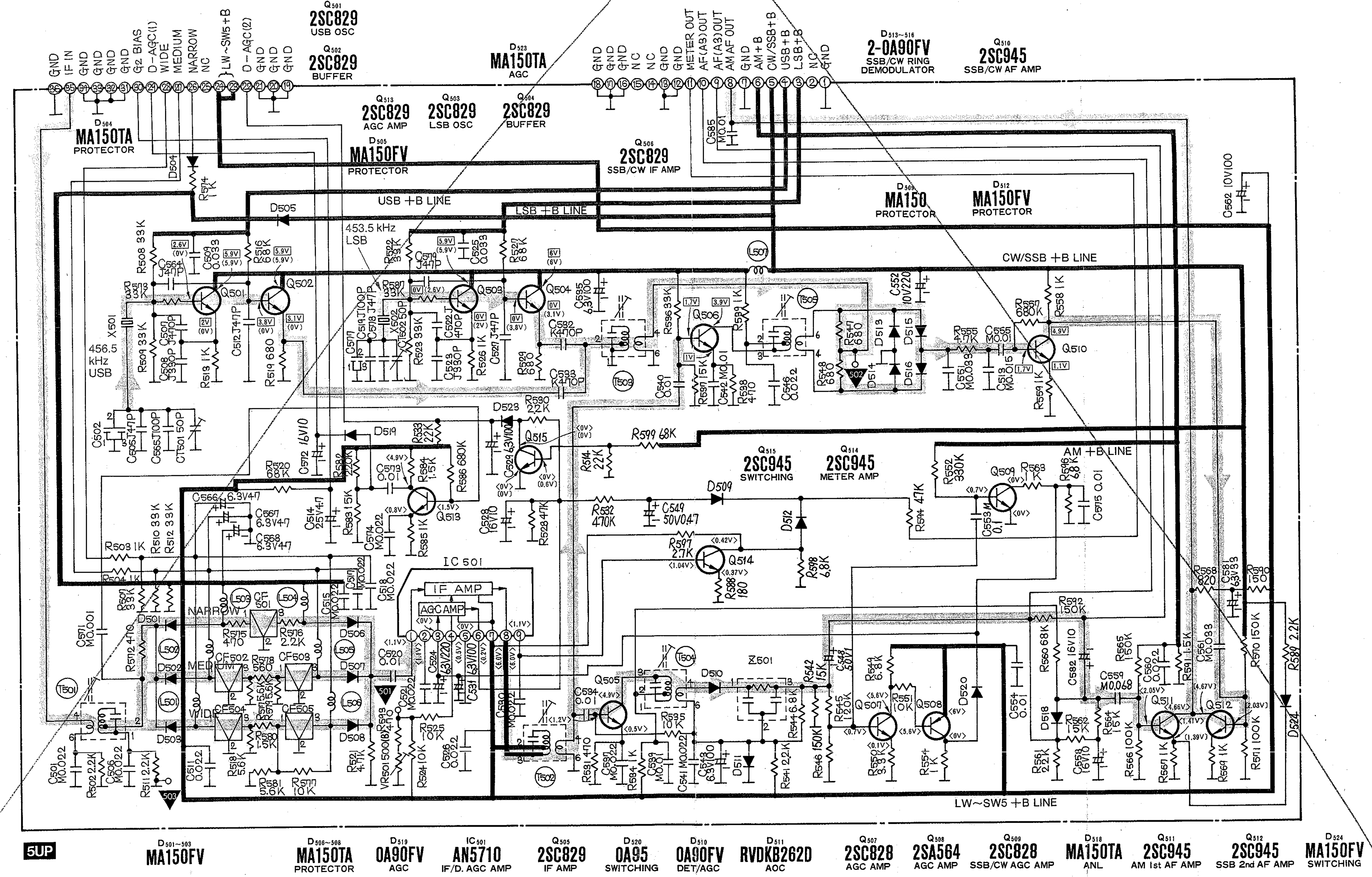
Bemerkungen:

1. S1301-1~1301-4: Antennenwahlschalter auf „Außenantenne"
   (1 . . . Geräteantenne, 3 . . . Außenantenne)
2. Die Markierung (▼) bezeichnet einen Meßpunkt, z.B:▼ = Meßpunkt 1.
3. Alle Gleichspannungen sind mit einem Elektronikvoltmeter vom negativen Batterieanschluß aus zu messen.
   ▭ . . . Stellung „KW2~KW5", 《 》 . . . Stellung „KW2~KW5" automatische Verstärkungsregelung AUS.
   ( ) . . . Stellung „KW2~KW5" automatische Verstärkungsregelung EIN.
   〈 〉 . . . Stellung „KW2~KW5" HF-Verstärkung Minimal Position.
   [ ] . . . Stellung „KW2~KW5" Geräteantenne.
4. VR301 . . . RW zur Trägerrest-Einstellung des 1. Überlagerers.

Remarques:

1. S1301-1~1301-4: Commutateur de sélecteur d'antenne en position "EXT ANT"
   (1 . . . ANTENNE INTERIEURE,
   3 . . . ANTENNE EXTERIEURE)
2. La marque (▼) signale un point de vérification. EX.: ▼ =point de vérification 1.
3. La tension c.c. est mesurée au moyen d'un voltmétre électronique à partir de la borne négative de la pile.
   ▭ . . . Position OC2~OC5, 《 》 . . . Anti-fading en position "OFF" (AGC OFF) OC2~OC5.
   ( ) . . . Anti-fading en position "ON" (AGC ON) OC2~OC5
   〈 〉 . . . Gain HF en position "MIN" OC2~OC5. [ ] . . . Position "ANTENNE INTERIEURE" OC2~OC5.
4. VR301: Réglage de dispersion de la première onde porteuse locale.

SCHEMATIC DIAGRAM (5 UP) . . . IF, DET, BPF, SSB & AM METER CIRCUIT


Q501 2SC829 USB OSC
Q502 2SC829 BUFFER
D523 MA150TA AGC
Q513 2SC829 AGC AMP
Q503 2SC829 LSB OSC
Q504 2SC829 BUFFER
D504 MA150TA PROTECTOR
D505 MA150FV PROTECTOR
Q506 2SC829 SSB/CW IF AMP
D513~516 2-0A90FV SSB/CW RING DEMODULATOR
Q510 2SC945 SSB/CW AF AMP
D509 MA150 PROTECTOR
D512 MA150FV PROTECTOR
Q515 2SC945 SWITCHING
Q514 2SC945 METER AMP
GND
IF IN
Q2 BIAS
D-AGC(1)
WIDE
MEDIUM
NARROW
NC
LW~SW5+B
D-AGC(2)
METER OUT
AF(A3)OUT
AF(A3J)OUT
AM AF OUT
AM+B
CW/SSB+B
USB+B
LSB+B
USB +B LINE
LSB +B LINE
CW/SSB +B LINE
AM +B LINE
LW~SW5 +B LINE
453.5 kHz LSB
456.5 kHz USB
IC 501
IF AMP
AGC AMP
NARROW
MEDIUM
WIDE
5UP
D501~503 MA150FV
D506~508 MA150TA PROTECTOR
D519 0A90FV AGC
IC501 AN5710 IF/D. AGC AMP
Q505 2SC829 IF AMP
D520 0A95 SWITCHING
D510 0A90FV DET/AGC
D511 RVDKB262D AOC
Q507 2SC828 AGC AMP
Q508 2SA564 AGC AMP
Q509 2SC828 SSB/CW AGC AMP
D518 MA150TA ANL
Q511 2SC945 AM 1st AF AMP
Q512 2SC945 SSB 2nd AF AMP
D524 MA150FV SWITCHING

Notes:

1. The mark (▼) shows test point, e.g. ▼ =test point 1.
2. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
   ▭ . . . AM USB position, (   ) . . . AM LSB position,
   〈 〉 . . . AM position, [   ] . . . SSB position

Bemerkungen:

1. Die Markierung (▼) bezeichnet einen Meßpunkt, z.B: ▼ = Meßpunkt 1.
2. Alle Gleichspannungen sind mit einem Elektronikvoltmeter vom negativen Batterieanschluß aus zu messen.
   ▭ . . . oberes AM Seitenband [   ] . . . Stellung "SSB"

Remarques:

1. La marque (▼) signale un point de vérification. Ex.: ▼ =point de vérification 1.
2. La tension c.c. est mesurée au moyen d'un voltmétre électronique à partir de la borne négative de la pile.
   ▭ . . . Position AM USB (bande latérale supérieure)

CIRCUIT BOARD WIRING VIEW (4 UP) . . . LW, MW, SW1—VCO, Xtal OSC & MIX CIRCUIT

Q407

	SW2~5
C	5.8V
B	1.6V
E	0.9V

IC401

	1	2	3	4	5	6	7
SW2~5	6V	5.2V	4.5V	0V	2.8V	2.8V	2.8V

Q409

	SW2~5
C	6V
B	4.5V
E	3.7V

Q408

	SW2~5
C	4.5V
B	1.9V
E	1.1V

Q402

	SW5
C	4.4V
B	0.9V
E	0.6V

Q401

	SW2~4
C	4.4V
B	0.9V
E	0.6V

Q405

	LW,MW,SW1
C	6.1V
B	3.4V
E	2.8V

Q406

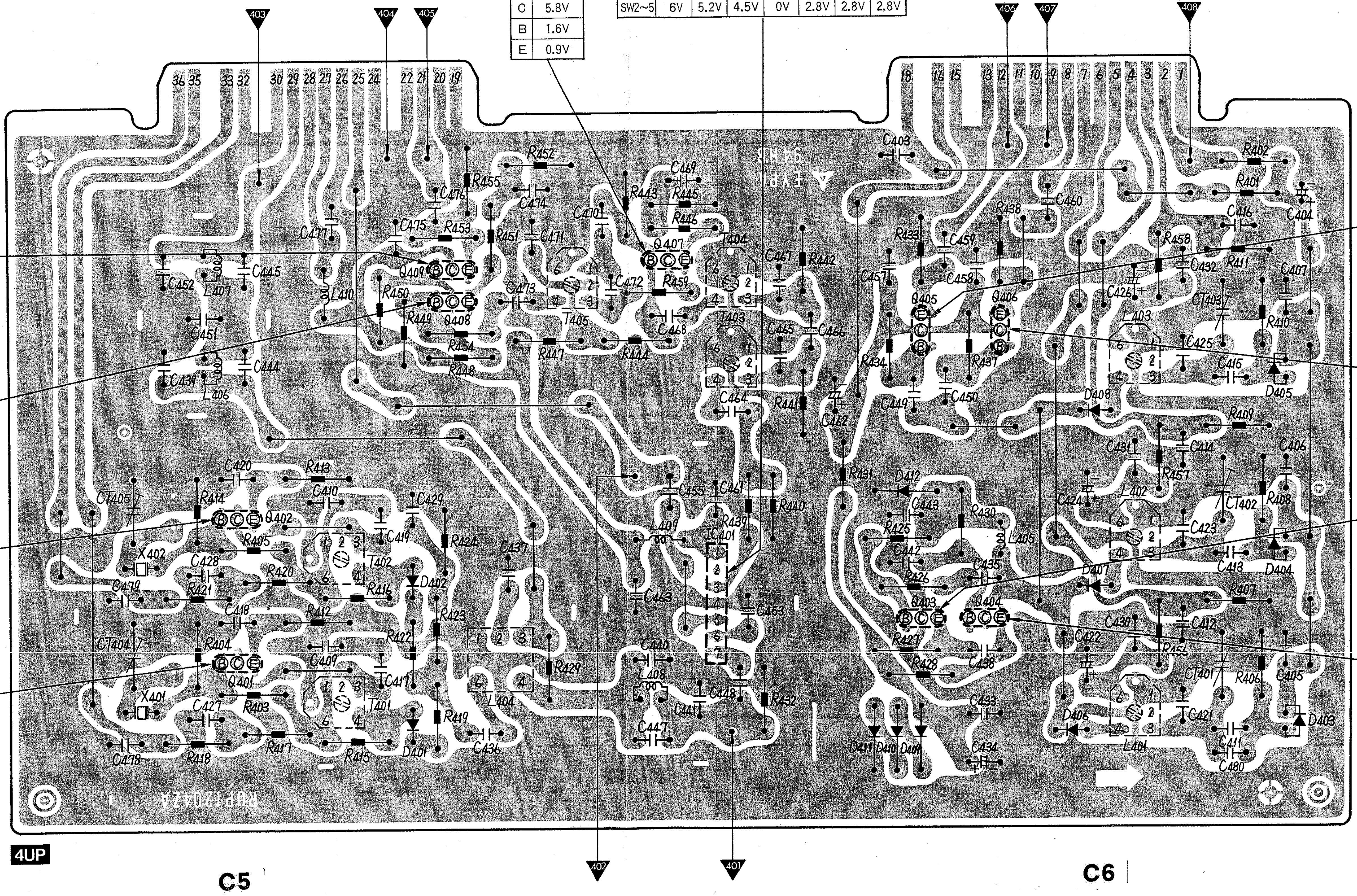
	LW,MW,SW1
C	6.1V
B	3.4V
E	2.8V

Q403

	LW,MW,SW1
C	0V
B	0.9V
E	1.5V

Q404

	LW,MW,SW1
C	0.6V
B	0.9V
E	1.5V

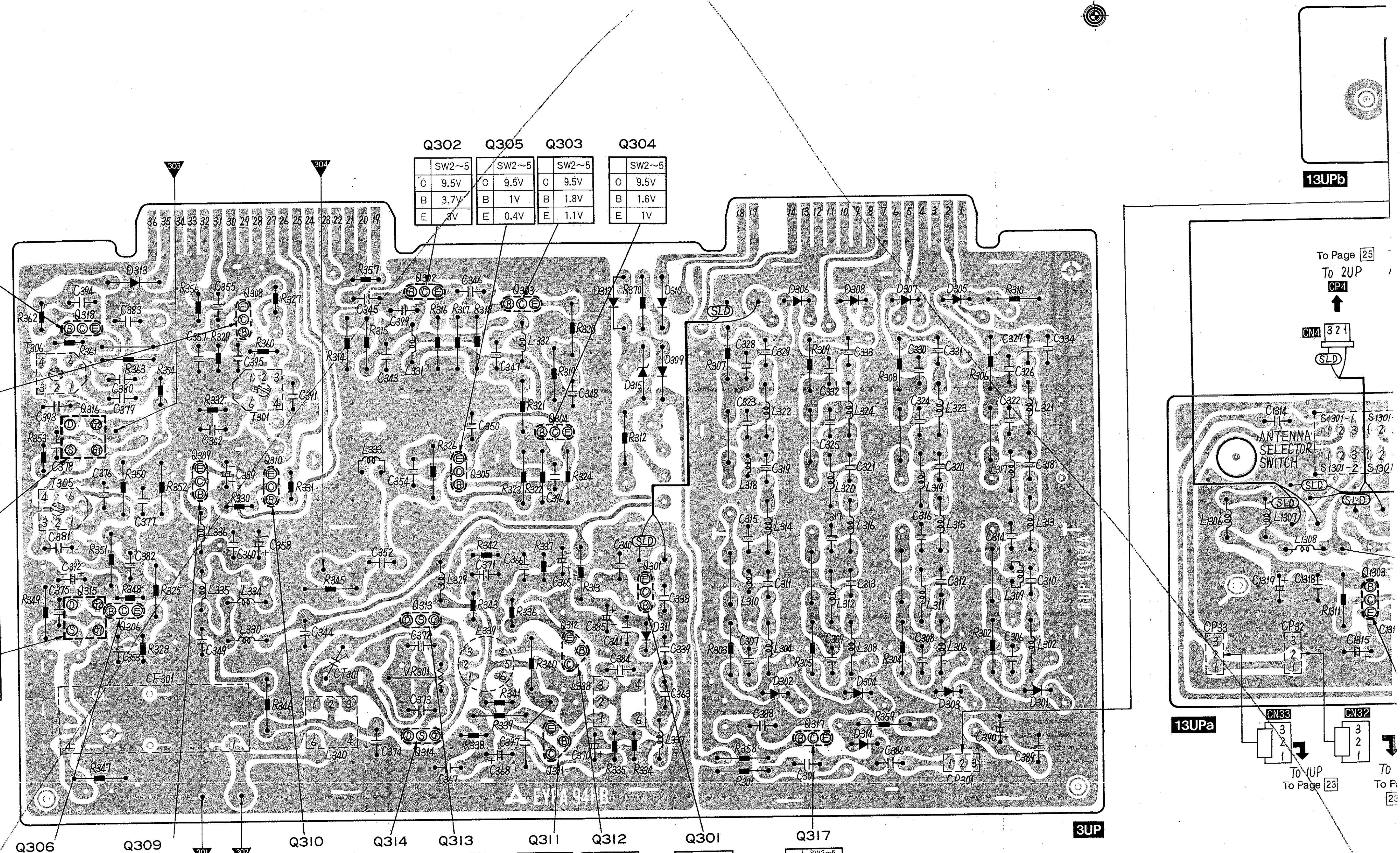

403
404
405
406
407
408
402
401
36 35 33 32 30 29 28 27 26 25 24 22 21 20 19
18 16 15 13 12 11 10 9 8 7 6 5 4 3 2 1
R452
C469
R455
C476
R443
R445
R446
C474
C470
C475
R453
R451
C471
C477
Q407
T404
C467
R442
C452
L407
C445
Q409
L410
R450
R449
Q408
C473
C472
R459
T405
C468
T403
C465
C466
C451
R454
R448
R447
R444
C439
L406
C444
C464
R441
C462
C403
R402
R401
C460
C404
R438
C416
R433
C459
R458
R411
C457
C458
C432
C407
Q405
Q406
C426
CT403
L403
R410
R434
R437
C425
C415
C449
C450
D408
D405
R409
C414
C406
R431
D412
C431
R457
C420
R413
C410
C429
C455
C461
R440
C443
R430
C424
L402
R408
CT405
R414
Q402
R405
C419
R424
C437
L409
R439
IC401
R425
C442
L405
CT402
C423
X402
C428
R420
T402
R416
D402
C435
C413
D404
C479
R421
C463
C453
R426
D407
R407
C418
R412
R423
Q403
Q404
C430
C412
CT404
R404
Q401
C409
C417
R422
R429
C440
R427
C438
C422
R456
CT401
R406
C405
X401
C427
R403
T401
L404
L408
C441
C448
R432
C433
D406
C421
L401
D403
R419
C447
D411
D410
D409
C434
C411
C480
C478
R418
R417
R415
D401
C436
RUP1204ZA
94HB

4UP

C5

C6

CIRCUIT BOARD WIRING VIEW (3 UP, 13 UPa, b) . . .SW2~5 BPF, RF—IF & ANT


303
304
301
302
36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19
18 17 14 13 12 11 10 9 8 7 6 5 4 3 2 1
EYPA 94HB
RUP1203ZA
3UP
13UPb
13UPa
To Page 25
To 2UP
CP4
CN4
SLD
ANTENNA SELECTOR SWITCH
S1301-1
S1301-2
CP33
CP32
CN33
CN32
To 1UP
To Page 23

Q318

	SW2~5
C	9.7V
B	1.6V
E	0.9V

Q308

	SW2~5
C	0.4V
B	3.1V
E	3.8V

Q316

	SW2~5
D	7.3V
G1	0V
G2	0V
S	0.2V

Q315

	SW2~5
D	6.1V
G1	0V
G2	3.2V
S	0.4V

Q302

	SW2~5
C	9.5V
B	3.7V
E	3V

Q305

	SW2~5
C	9.5V
B	1V
E	0.4V

Q303

	SW2~5
C	9.5V
B	1.8V
E	1.1V

Q304

	SW2~5
C	9.5V
B	1.6V
E	1V

Q306

	SW2~5 AGC ON	SW2~5 AGC OFF
C	0V	3.2V
B	0.6V	0V
E	0V	0V

Q309

	SW2~5	
C	9.8V	0V
B	9.1V	9.3V
E	9.8V	9.8V

Q310

	SW2~5	
C	0V	9.3V
B	0.7V	0V
E	0V	0V

Q314

	SW2~5
D	9.5V
G	0V
S	1V

Q313

	SW2~5
D	9.5V
G	0V
S	1V

Q311

	SW2~5
C	9.5V
B	0.7V
E	0.1V

Q312

	SW2~5
C	9.5V
B	0.7V
E	0.1V

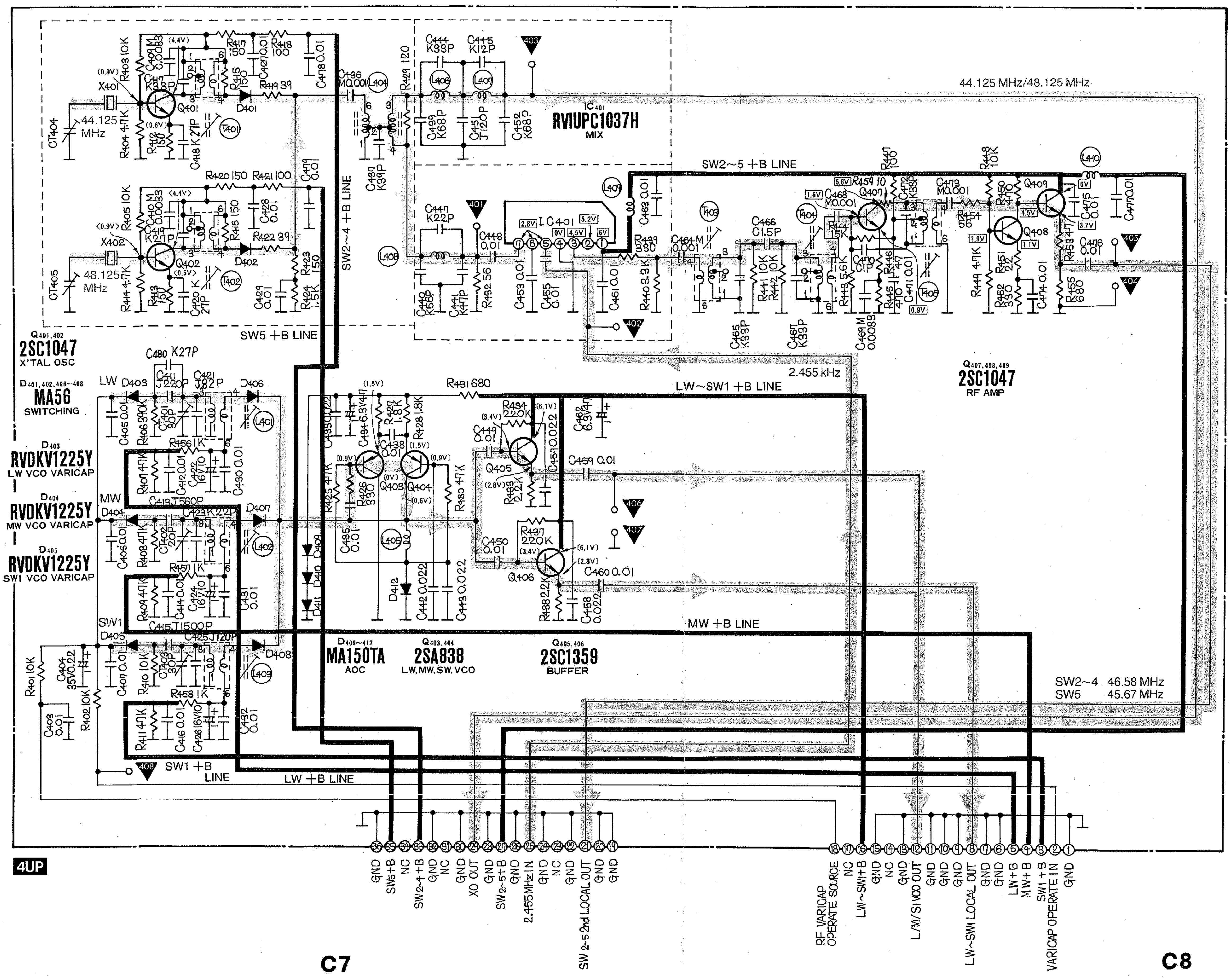
Q301

	SW2~5
C	9.3V
B	0.2V
E	0V

Q317

	SW2~5 RF GAIN MIN
C	0V
B	0.6V
E	0V

SCHEMATIC DIAGRAM (4 UP) . . . LW, MW, SW1—VCO, Xtal OSC & MIX CIRCUIT

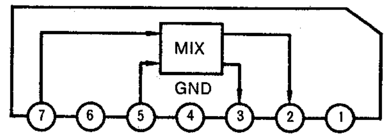

Q401, 402 2SC1047 X'TAL OSC
D401, 402, 406~408 MA56 SWITCHING
D403 RVDKV1225Y LW VCO VARICAP
D404 RVDKV1225Y MW VCO VARICAP
D405 RVDKV1225Y SW1 VCO VARICAP
D409~412 MA150TA AOC
Q403, 404 2SA838 LW, MW, SW, VCO
Q405, 406 2SC1359 BUFFER
Q407, 408, 409 2SC1047 RF AMP
IC401 RVIUPC1037H MIX
44.125 MHz
48.125 MHz
44.125 MHz/48.125 MHz
2.455 kHz
SW2~4 46.58 MHz
SW5 45.67 MHz
SW2~5 +B LINE
SW2~4 +B LINE
SW5 +B LINE
LW~SW1 +B LINE
MW +B LINE
SW1 +B LINE
LW +B LINE
LW
MW
SW1
GND
SW5+B
NC
SW2~4 +B
GND
NC
GND
XO OUT
GND
SW2~5+B
GND
2.455MHz IN
GND
NC
GND
SW 2~5 2nd LOCAL OUT
GND
GND
RF VARICAP OPERATE SOURCE
NC
LW~SW1+B
GND
NC
GND
L/M/SI VCO OUT
GND
GND
GND
LW~SW1 LOCAL OUT
GND
GND
LW+B
MW+B
SW1+B
VARICAP OPERATE IN
GND

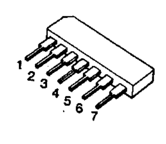
Notes:
1. The mark (▼) shows test point, e.g. ▼ = test point 1.
2. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
   - ☐ . . . SW2~SW5 position,
   - ( ) . . . SW2~SW4 position,
   - 〈 〉. . . SW5 position,
   - [ ] . . . LW, MW, SW1 position.

Bemerkungen:
1. Die Markierung (▼) bezeichnet einen Meßpunkt, z.B: ▼ = Meßpunkt 1.
2. Alle Gleichspannungen sind mit einem Elektronikvoltmeter vom negativen Batterieanschluß aus zu messen.
   - ☐ . . . Stellung „KW2~KW5",
   - ( ) . . . Stellung, „KW2~KW4",
   - 〈 〉. . . Stellung, „KW5",
   - [ ] . . . Stellung „LW, MW, KW 1".

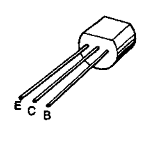
Remarques:
1. La marque (▼) signale un point de vérification. EX.: ▼ = point de vérification 1.
2. La tension c.c. est meaurée au moyen d'un voltmétre électronique à partir de la borne négative de la pile.
   - ☐ . . . Position OC2~OC5,
   - ( ) . . . Position OC2~OC4,
   - 〈 〉. . . Position OC5,
   - [ ] . . . Position GO, PO, OC1.

IC401 RVIUPC1037H

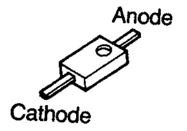

MIX
GND
7
6
5
4
3
2
1



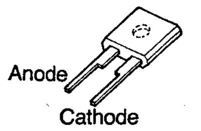
IC401



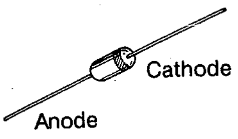
Q401~409


Anode
Cathode

D401, 402, 406~408

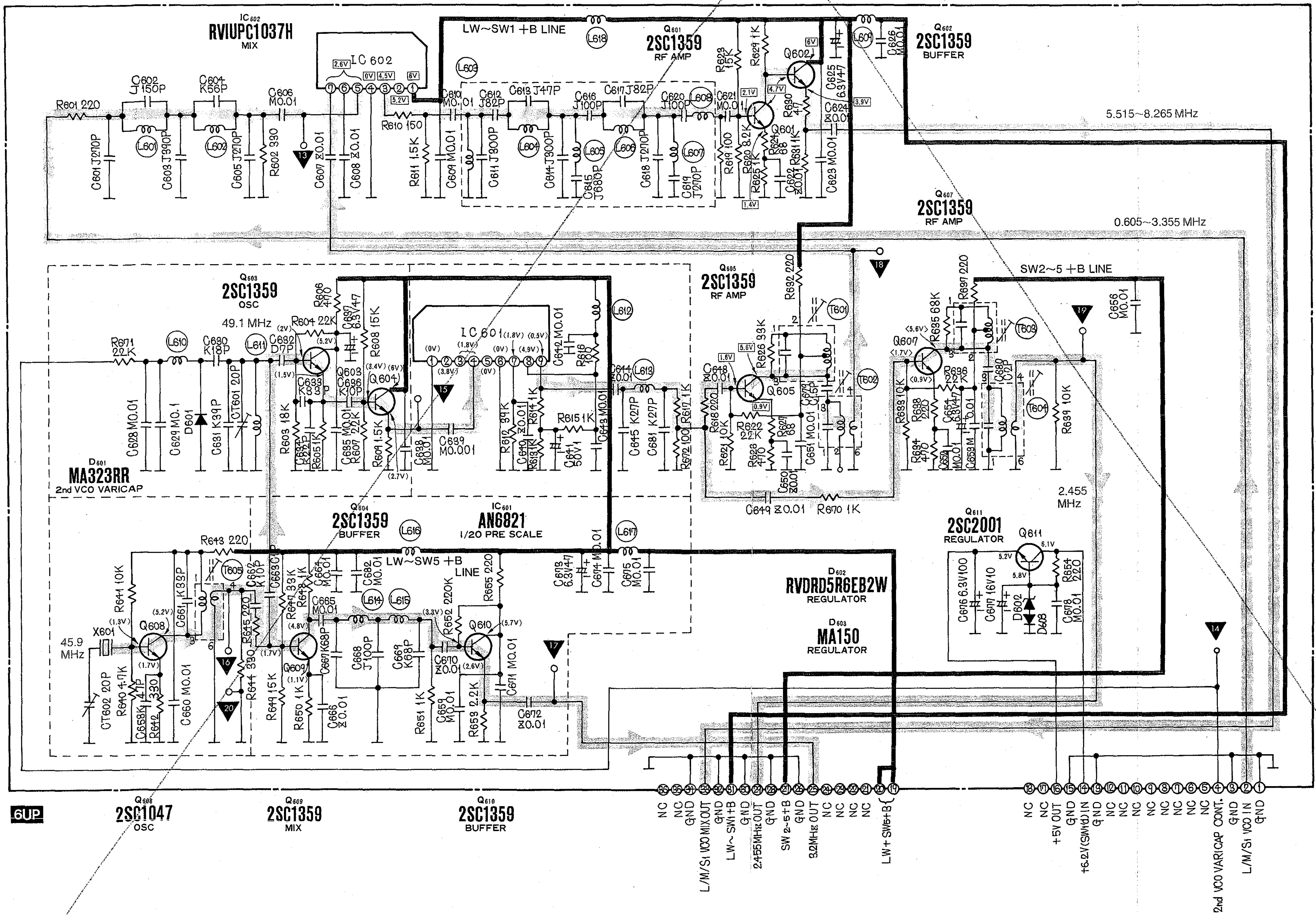

Anode
Cathode

D403~405

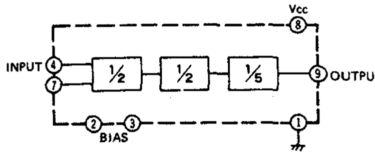

Cathode
Anode

D409~412

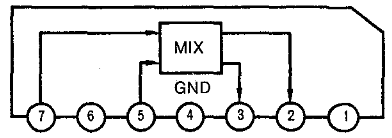
SCHEMATIC DIAGRAM (6 UP) . . . 2nd PLL ,VCO & MIX CIRCUIT


IC602 RVIUPC1037H MIX
IC 602
LW~SW1 +B LINE
Q601 2SC1359 RF AMP
Q602 2SC1359 BUFFER
Q607 2SC1359 RF AMP
Q603 2SC1359 OSC
Q605 2SC1359 RF AMP
49.1 MHz
IC 601
5.515~8.265 MHz
0.605~3.355 MHz
SW2~5 +B LINE
D601 MA323RR 2nd VCO VARICAP
Q604 2SC1359 BUFFER
IC601 AN6821 1/20 PRE SCALE
LW~SW5 +B LINE
D602 RVDRD5R6EB2W REGULATOR
D603 MA150 REGULATOR
Q611 2SC2001 REGULATOR
2.455 MHz
45.9 MHz
X601
6UP
Q608 2SC1047 OSC
Q609 2SC1359 MIX
Q610 2SC1359 BUFFER
NC
NC
GND
L/M/S1 VCO MIX OUT
GND
LW~SW1+B
GND
2.455MHz OUT
GND
SW2~5+B
GND
3.2MHz OUT
NC
NC
NC
NC
LW+SW5+B
NC
NC
+5V OUT
GND
+6.2V(SW1-5) IN
NC
NC
NC
NC
NC
NC
NC
NC
2nd VCO VARICAP CONT.
GND
L/M/S1 VCO IN
GND

IC601 AN6821


Vcc
INPUT
OUTPUT
½
½
⅕
BIAS

IC602 RVIUPC1037H



Notes:

1. The mark (▼) shows test point, e.g. ▼=test point 1.
2. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
   ▭... LW, MW, SW1 position, ( )... AM position,
   < >... SW2~SW5 position.

Bemerkungen:

1. Die Markierung (▼) bezeichnet einen Meßpunkt, z.B:▼= Meßpunkt 1.
2. Alle Gleichspannungen sind mit einem Elektronikvoltmeter vom negativen Batterieanschluß aus zu messen.
   ▭... Stellung „LW, MW, KW1", ( )... Stellung „AM",
   < >... Stellung „KW2~KW5".

Remarques:

1. La marque (▼) signale un point de vérification. Ex.: ▼ =point de vérification 1.
2. La tension c.c. est mesurée au moyen d'un voltmétre électronique à partir de la borne négative de la pile.
   ▭... Position GO, PO, OC1, ( )... Position AM,
   < >... Position OC2~OC5.

CIRCUIT BOARD WIRING VIEW (5 UP) . . . IF, DET, BPF, SSB & AM METER CIRCUIT

Q510

	AM USB/LSB
C	4.9V
B	1.7V
E	1.1V

Q512

	SSB
C	4.67V
B	2.03V
E	1.39V

Q509

	AM
C	0V
B	0.7V
E	0V

Q511

	AM
C	4.66V
B	2.05V
E	1.41V

Q514

	AM
C	0.42V
B	1.04V
E	0.37V

Q505

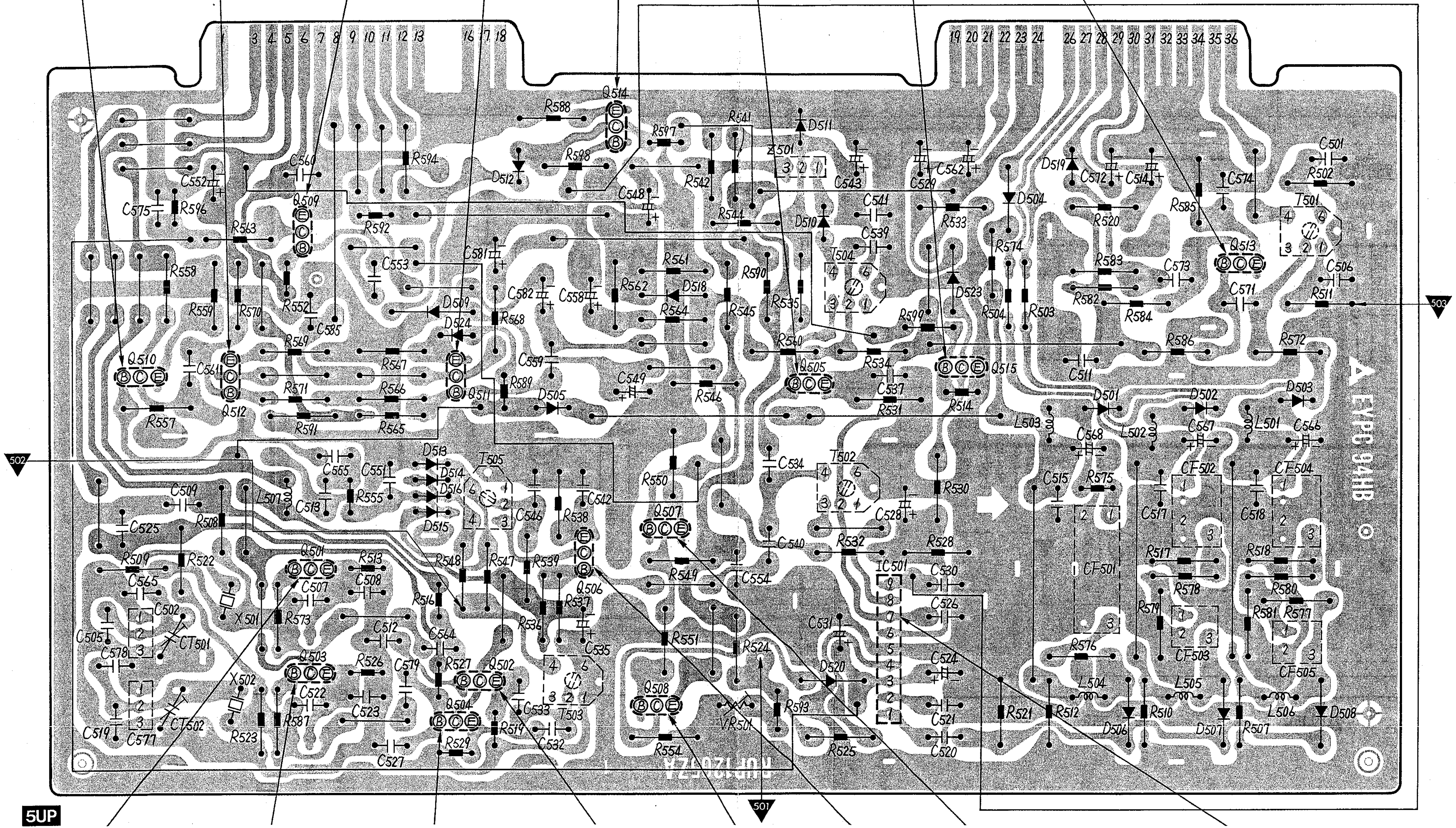
	AM
C	4.9V
B	1.2V
E	0.5V

Q515

	AM	SSB
C	0V	0V
B	0V	0.6V
E	0V	0V

Q513

	AM
C	4.9V
B	1.5V
E	0.8V


1 3 4 5 6 7 8 9 10 11 12 13 16 17 18
19 20 21 22 23 24 26 27 28 29 30 31 32 33 34 35 36
Q514
R588
R597
R541
D511
Z501
R598
D512
C560
R594
C552
C575
R596
Q509
R563
R592
C548
R542
R544
C543
C562
C529
C541
D510
C539
R533
D519
C512
C514
D504
R520
R585
C574
C501
R502
T501
Q513
C506
R511
R558
R559
R570
R552
C585
C553
C581
D509
D524
R568
C582
C558
R562
R561
D518
R564
R590
R545
R535
T504
D523
R599
R574
R504
R503
R583
R582
C573
C571
R584
R586
R572
Q510
C561
Q512
R549
R571
R591
R547
R566
R565
Q511
R589
C559
D505
C549
R546
R540
Q505
R534
C537
R531
Q515
R514
C511
D501
D502
D503
L503
C568
L502
C567
L501
C566
R557
D513
D514
D516
D515
T505
C565
C551
R555
C513
L507
C509
C525
R508
C546
C542
R538
R550
Q507
C534
T502
R530
C528
C515
R575
CF502
CF504
C517
C518
CF501
R509
R522
C545
Q501
R513
C508
C507
R548
R547
R539
Q506
R549
C554
C540
R532
R528
IC501
C530
C526
R517
R518
R578
R580
C505
C502
CT501
C578
X501
R573
R516
C564
C512
R537
R536
C535
R551
R524
C531
R579
R581
R577
CF503
CF505
R576
C519
C577
CT502
X502
R523
Q503
C522
R587
R526
C579
C523
R527
Q502
Q504
R529
C527
C533
T503
R519
C532
Q508
R554
VR501
R593
R625
D520
C524
C521
C520
R521
R512
L504
D506
R510
L505
D507
R507
L506
D508
EYPC 941B
502
503
501

5UP

Q501

	AM USB	AM LSB
C	5.9V	5.9V
B	2.6V	0V
E	2V	0V

Q503

	AM USB	AM LSB
C	5.9V	5.9V
B	0V	2.6V
E	0V	2.0V

Q504

	AM USB	AM LSB
C	6V	6V
B	0V	3.8V
E	0V	3.1V

Q502

	AM USB	AM LSB
C	5.9V	5.9V
B	3.8V	0V
E	3.1V	0V

Q508

	AM
C	0V
B	5.6V
E	6V

Q506

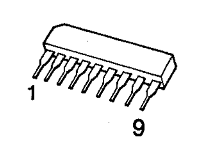
	AM USB/LSB
C	3.9V
B	1.7V
E	1V

Q507

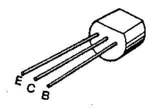
	AM
C	5.6V
B	0.7V
E	0.1V

IC501

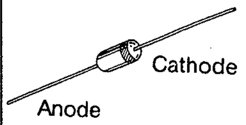
	1	2	3	4	5	6	7	8	9
AM	1.1V	1.1V	0V	0.5V	0V	0.2V	6.0V	6.0V	1.1V



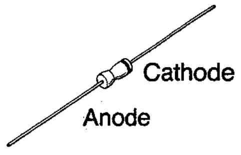
IC501



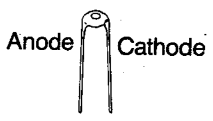
Q501~515


Cathode
Anode

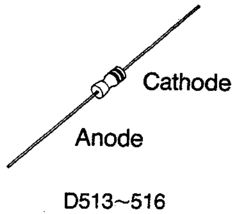
D501~509, 512, 518, 523


Cathode
Anode

D510, 519, 522


Anode
Cathode

D511


Cathode
Anode

D513~516

4 UP **4 UP**

CIRCUIT BOARD WIRING VIEW (4 UP) . . . LW, MW, SW1—VCO, Xtal OSC & MIX CIRCUIT

Q407

	SW2~5
C	5.8V
B	1.6V
E	0.9V

IC401

	1	2	3	4	5	6	7
SW2~5	6V	5.2V	4.5V	0V	2.8V	2.8V	2.8V

Q4

	LW,M
C	6
B	3
E	2

Q406

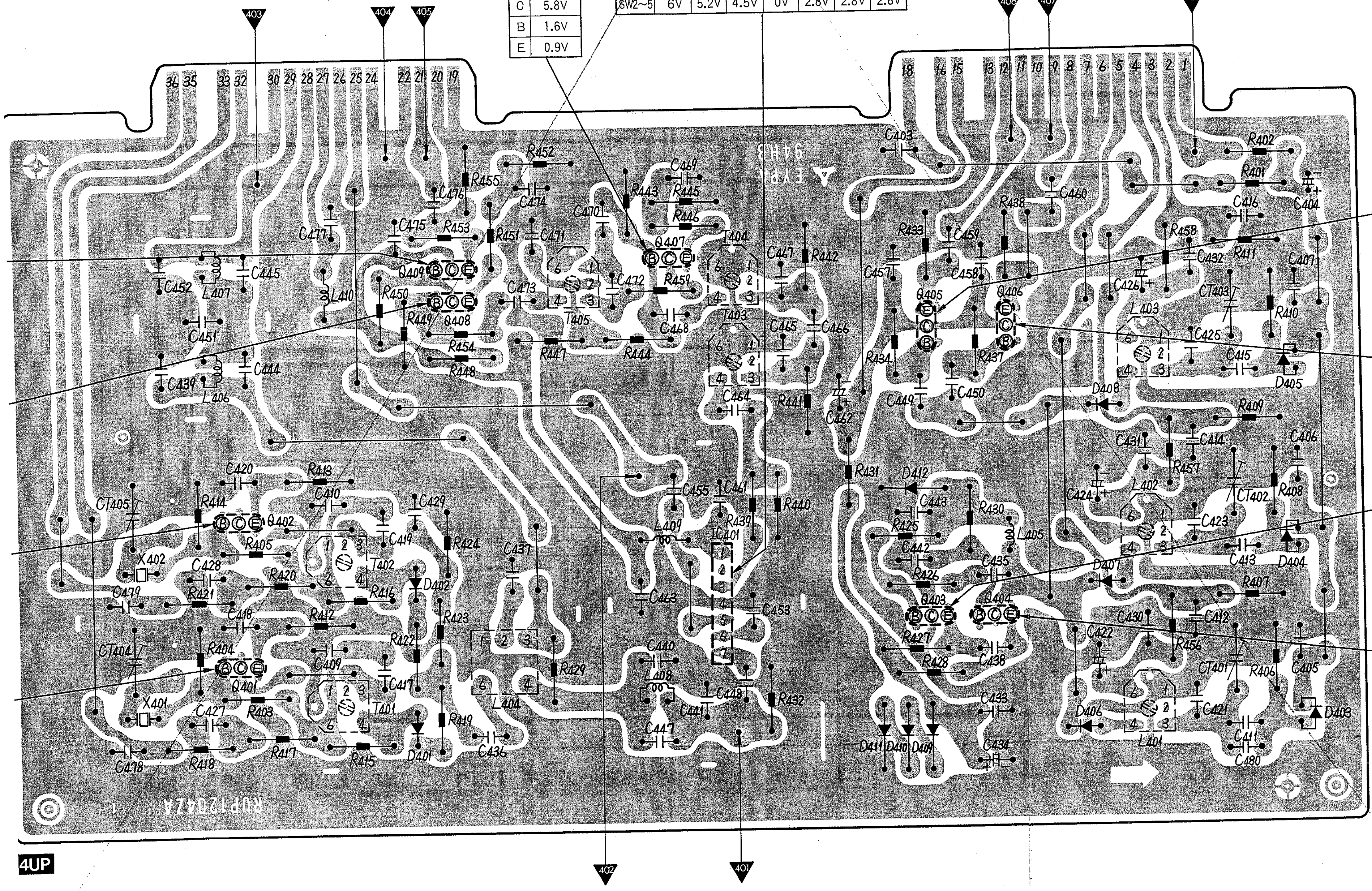
	LW,MW,SW
C	6.1V
B	3.4V
E	2.8V

Q403

	LW,MW,SW
C	0V
B	0.9V
E	1.5V

Q404

	LW,MW,SW
C	0.6V
B	0.9V
E	1.5V


401
402
403
404
405
406
407
408
36 35 33 32 30 29 28 27 26 25 24 22 21 20 19
18 16 15 13 12 11 10 9 8 7 6 5 4 3 2 1
94H3
RUP12D42A
Q401
Q402
Q403
Q404
Q405
Q406
Q407
Q408
Q409
IC401
T401
T402
T403
T404
T405
L401
L402
L403
L404
L405
L406
L407
L408
L409
L410
X401
X402
CT401
CT402
CT403
CT404
CT405
D401
D402
D403
D404
D405
D406
D407
D408
D409
D410
D411
D412
R401
R402
R403
R404
R405
R406
R407
R408
R409
R410
R411
R412
R413
R414
R415
R416
R417
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R419
R420
R421
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R426
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R428
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R432
R433
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R445
R446
R447
R448
R449
R450
R451
R452
R453
R454
R455
R456
R457
R458
R459
C403
C404
C405
C406
C407
C409
C410
C411
C412
C413
C414
C415
C416
C417
C418
C419
C420
C421
C422
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C424
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C427
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C430
C431
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C433
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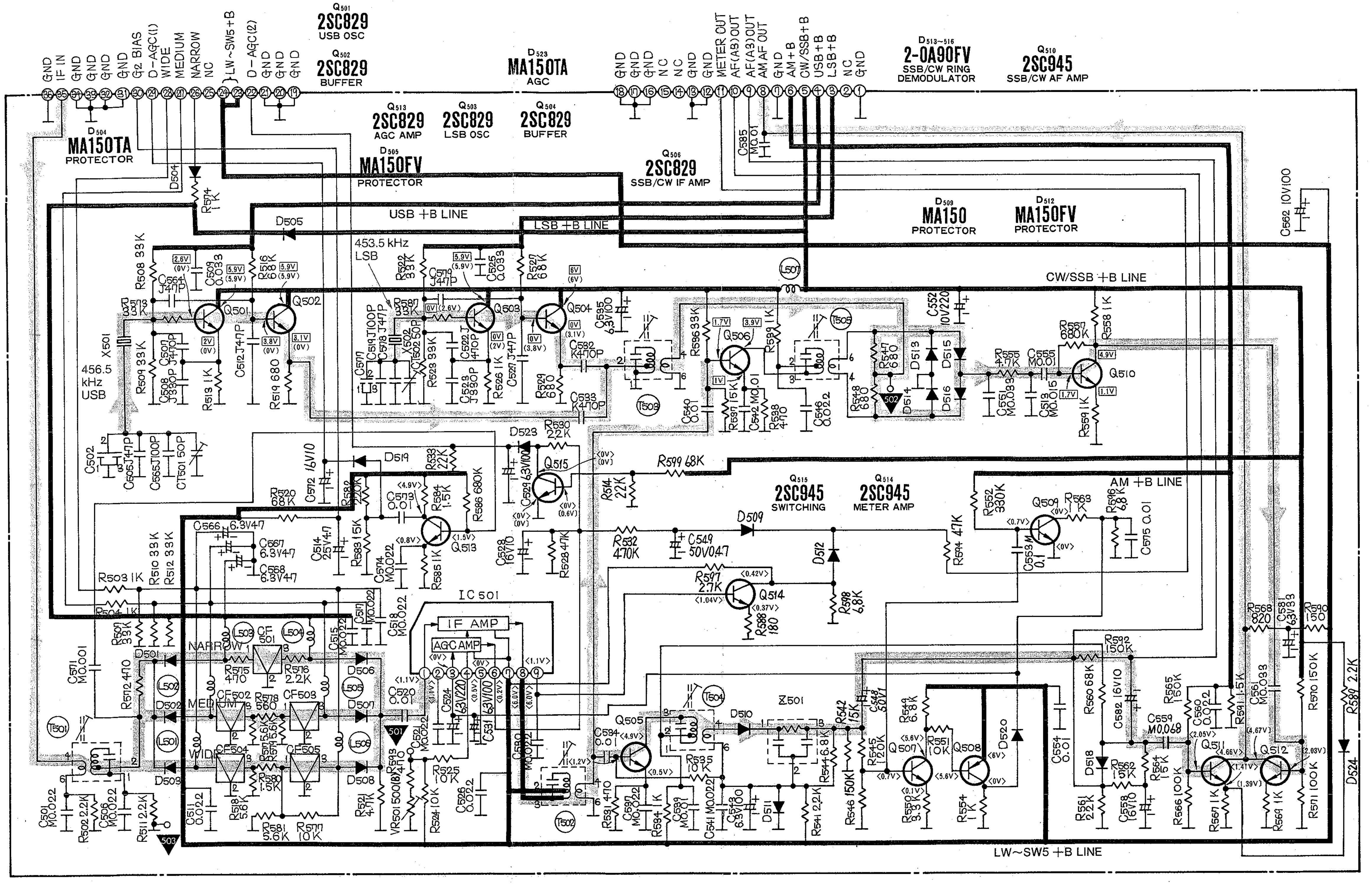
C448
C449
C450
C451
C452
C453
C455
C457
C458
C459
C460
C461
C462
C463
C464
C465
C466
C467
C468
C469
C470
C471
C472
C473
C474
C475
C476
C477
C478
C479
C480

4UP

SCHEMATIC DIAGRAM (5 UP) . . . IF, DET, BPF, SSB & AM METER CIRCUIT


GND
IF IN
GND
GND
GND
GND
G2 BIAS
D-AGC(1)
WIDE
MEDIUM
NARROW
NC
LW~SW5+B
D-AGC(2)
GND
GND
GND
GND
GND
GND
NC
NC
GND
GND
METER OUT
AF(A3) OUT
AF(A3) OUT
AM AF OUT
GND
AM+B
CW/SSB+B
USB+B
LSB+B
NC
GND
Q501 2SC829 USB OSC
Q502 2SC829 BUFFER
D523 MA150TA AGC
Q513 2SC829 AGC AMP
Q503 2SC829 LSB OSC
Q504 2SC829 BUFFER
D504 MA150TA PROTECTOR
D505 MA150FV PROTECTOR
Q506 2SC829 SSB/CW IF AMP
D513~516 2-0A90FV SSB/CW RING DEMODULATOR
Q510 2SC945 SSB/CW AF AMP
D509 MA150 PROTECTOR
D512 MA150FV PROTECTOR
USB +B LINE
LSB +B LINE
CW/SSB +B LINE
AM +B LINE
LW~SW5 +B LINE
453.5 kHz LSB
456.5 kHz USB
X501
X502
Q515 2SC945 SWITCHING
Q514 2SC945 METER AMP
IC501
IF AMP
AGC AMP
NARROW
MEDIUM
WIDE
CF501
CF502
CF503
CF504
CF505
Z501
T501
T502
T503
T504
T505
L501
L502
L503
L504
L505
L506
L507
VR501 500(B)
501
502
503
Q505
Q507
Q508
Q509
Q511
Q512
D501
D502
D503
D506
D507
D508
D510
D511
D518
D519
D520
D524

5UP

D501~503	D506~508	D519	IC501	Q505	D520	D510	D511	Q507	Q508	Q509	D518	Q511	Q512	D524
MA150FV	MA150TA	0A90FV	AN5710	2SC829	0A95	0A90FV	RVDKB262D	2SC828	2SA564	2SC828	MA150TA	2SC945	2SC945	MA150FV
	PROTECTOR	AGC	IF/D. AGC AMP	IF AMP	SWITCHING	DET/AGC	AOC	AGC AMP	AGC AMP	SSB/CW AGC AMP	ANL	AM 1st AF AMP	SSB 2nd AF AMP	SWITCHING

Notes:

1. The mark (▼) shows test point, e.g. ▼ =test point 1.
2. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
   ☐ . . . AM USB position, ( ) . . . AM LSB position,
   〈 〉. . . AM position. [ ] . . . SSB position.
3. VR501 . . . AM D.AGC adjustment.

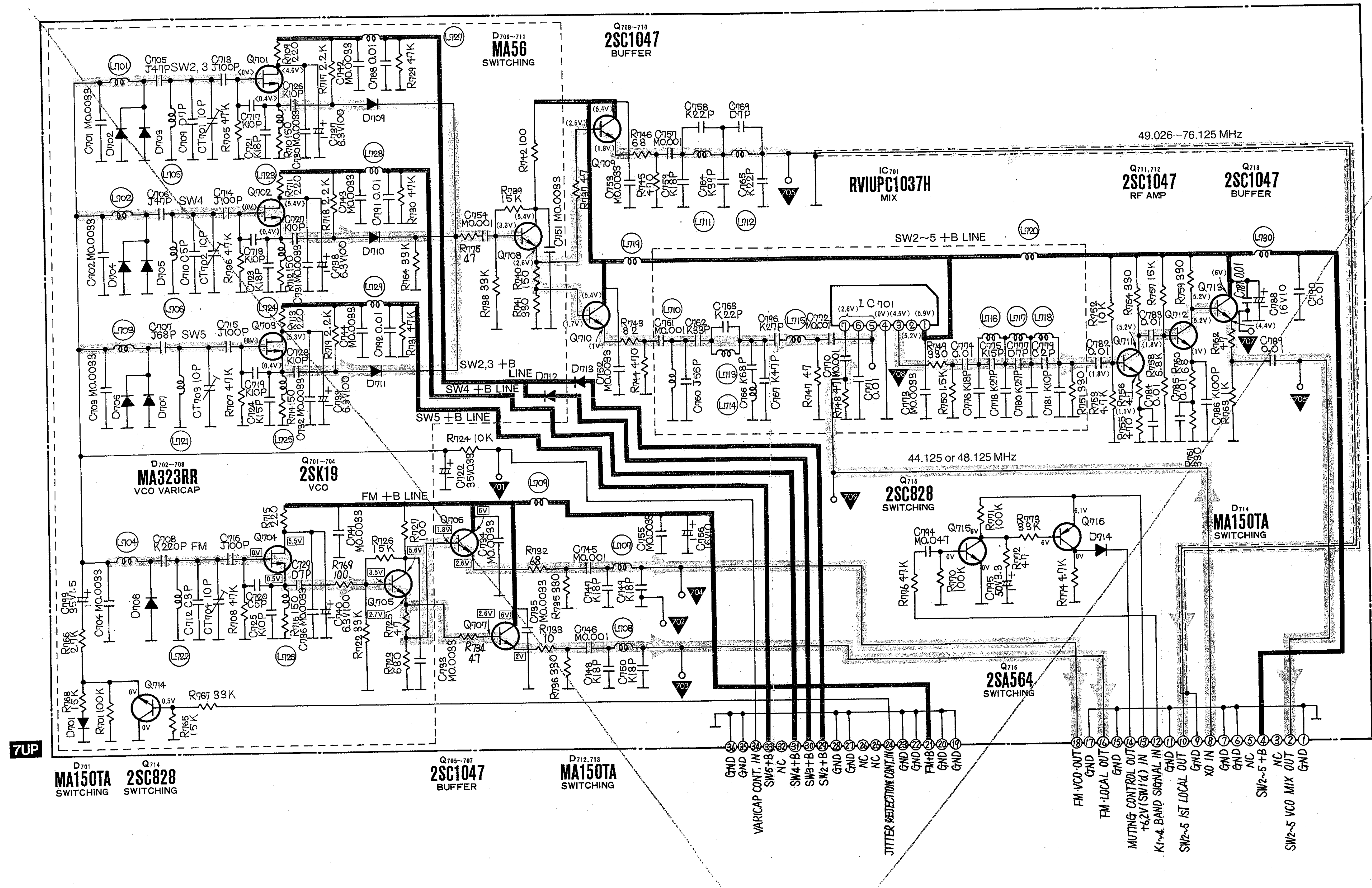
Bemerkungen:

1. Die Markierung (▼) bezeichnet einen Meßpunkt, z.B: ▼ = Meßpunkt 1.
2. Alle Gleichspannungen sind mit einem Elektronikvoltmeter vom negativen Batterieanschluß aus zu messen.
   ☐ . . . oberes AM-Seitenband, [ ] . . . Stellung „SSB"
   ( ) . . . unteres AM-Seitenband, 〈 〉 . . . Stellung „AM".
3. VR501 . . . RW zur Einstellung der verzögerten AM-Verstärkungsregelung.

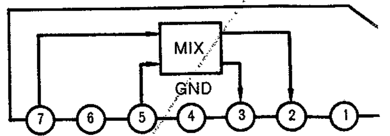
Remarques:

1. La marque (▼) signale un point de vérification. Ex.: ▼ =point de vérification 1.
2. La tension c.c. est mesurée au moyen d'un voltmétre électronique à partir de la borne négative de la pile.
   ☐ . . . Position AM USB (bande latérale supérieure),
   ( ) . . . Position AM LSB (bande latérale inférieure),
   〈 〉. . . Position AM. [ ] . . . Position SSB.
3. VR501 . . . Réglage D.AGC (anti-fading) pour AM.

SCHEMATIC DIAGRAM (7 UP) . . . SW2~5, FM VCO, MIX & MUTING CIRCUIT


D709~711
MA56
SWITCHING
Q708~710
2SC1047
BUFFER
IC701
RVIUPC1037H
MIX
Q711,712
2SC1047
RF AMP
Q713
2SC1047
BUFFER
49.026~76.125 MHz
SW2~5 +B LINE
SW2,3 +B LINE
SW4 +B LINE
SW5 +B LINE
FM +B LINE
44.125 or 48.125 MHz
D702~708
MA323RR
VCO VARICAP
Q701~704
2SK19
VCO
Q715
2SC828
SWITCHING
D714
MA150TA
SWITCHING
Q716
2SA564
SWITCHING
7UP
D701
MA150TA
SWITCHING
Q714
2SC828
SWITCHING
Q705~707
2SC1047
BUFFER
D712,713
MA150TA
SWITCHING
C705 J4.7P SW2, 3
C714 J4.7P SW4
C707 J68P SW5
C708 K220P FM
GND
GND
VARICAP CONT. IN
SW5+B
NC
SW4+B
SW3+B
SW2+B
GND
GND
NC
NC
JITTER REJECTION CONT. IN
GND
GND
FM+B
GND
GND
FM-VCO OUT
GND
FM-LOCAL OUT
GND
MUTING CONTROL OUT
+6.2V (SW(d)) IN
K1~4 BAND SIGNAL IN
SW2~5 1ST LOCAL OUT
GND
XO IN
GND
GND
NC
SW2~5 +B
NC
SW2~5 VCO MIX OUT
GND

IC701 RVIUPC1037H


MIX
GND
7
6
5
4
3
2
1

Notes:

1. The mark (▼) shows test point, e.g. ▼ =test point 1.
2. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.

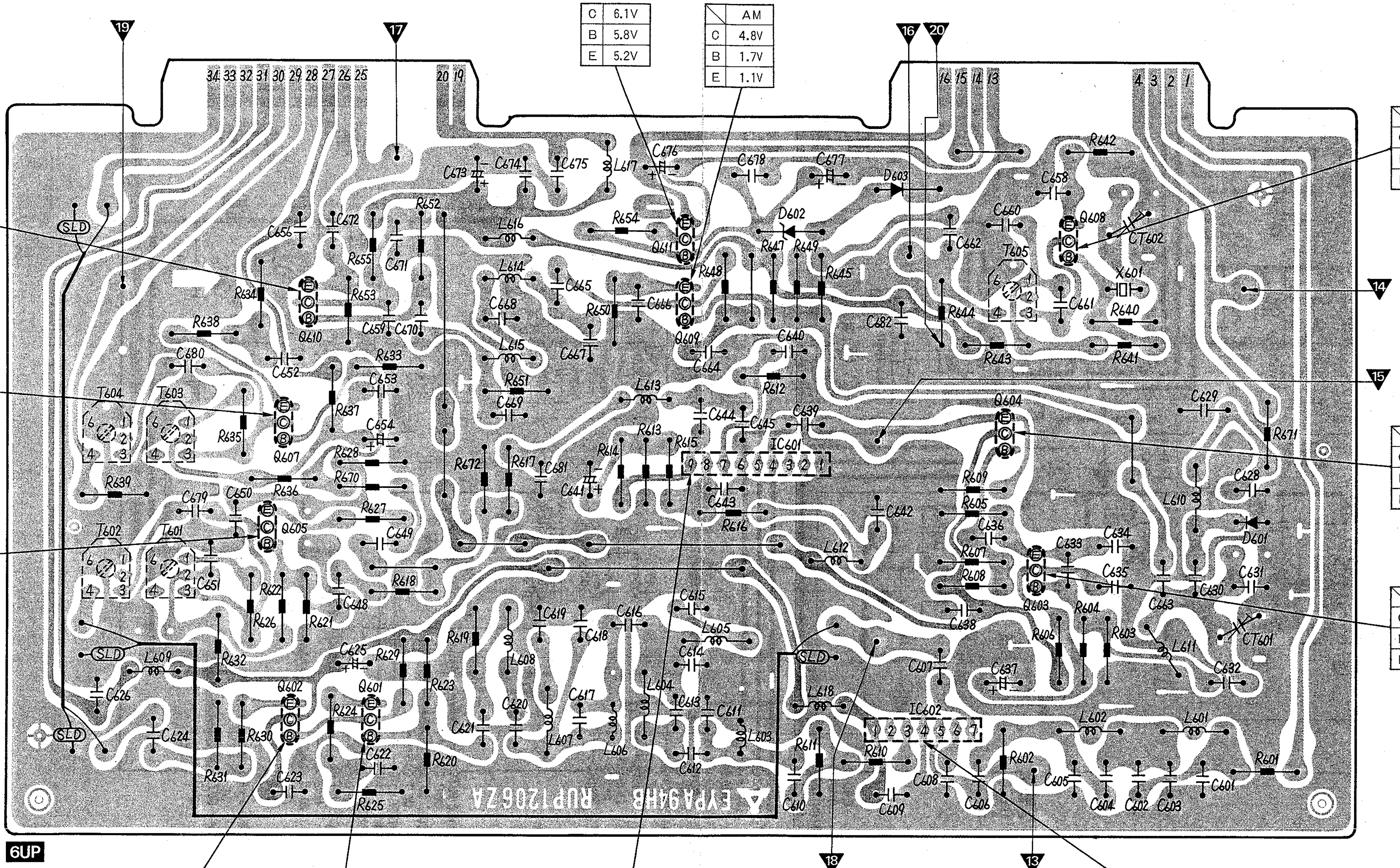
Bemerkungen:

1. Die Markierung (▼) bezeichnet einen Meßpunkt, z.B.: ▼= Meßpunkt 1.
2. Alle Gleichspannungen sind mit einem Elektronikvoltmeter vom

Remarques:

1. La marque (▼) signale un point de vérification. Ex.: ▼ =point de vérification 1.
2. La tension c.c. est mesurée au moyen d'un voltmétre électronique

CIRCUIT BOARD WIRING VIEW (6 UP) . . . 2nd PLL, VCO & MIX CIRCUIT


19
17
16
20
14
15
18
13
34 33 32 31 30 29 28 27 26 25
20 19
16 15 14 13
4 3 2 1
SLD
IC601
IC602
Q601
Q602
Q603
Q604
Q605
Q607
Q608
Q609
Q610
Q611
T601
T602
T603
T604
T605
X601
CT601
CT602
D601
D602
D603
L601
L602
L603
L604
L605
L606
L607
L608
L609
L610
L611
L612
L613
L614
L615
L616
L617
L618
EYPA94HB RUP1206ZA
6UP

Q611

C	6.1V
B	5.8V
E	5.2V

Q609

	AM
C	4.8V
B	1.7V
E	1.1V

Q608

	AM
C	5.2V
B	1.3V
E	1.7V

Q610

	AM
C	5.7V
B	3.3V
E	2.6V

Q607

	SW2~5
C	5.6V
B	1.7V
E	0.9V

Q604

	AM
C	6V
B	3.4V
E	2.7V

Q605

	LW,MW,SW1
C	5.6V
B	1.6V
E	0.9V

Q603

	AM
C	5.2V
B	2V
E	1.5V

Q602

	LW,MW,SW1
C	6V
B	4.7V
E	3.9V

Q601

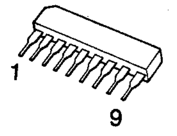
	LW,MW,SW1
C	4.7V
B	2.1V
E	1.4V

IC601

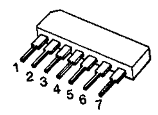
	1	2	3	4	5	6	7	8	9
AM	0V	3.8V	1.8V	1.8V	0V	0V	1.8V	4.9V	0.5V

IC602

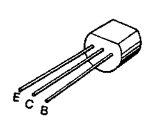
	1	2	3	4	5	6	7
LW,MW,SW1	6V	5.2V	4.5V	0V	2.6V	2.6V	2.6V



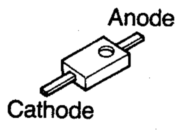
IC601



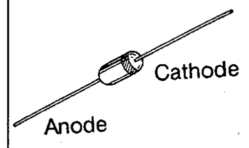
IC602



Q601~605, 607~611


Anode
Cathode

D601


Cathode
Anode

D602

CIRCUIT BOARD WIRING VIEW (5 UP) . . . IF, DET, BPF, SSB & AM METER CIRCUIT

Q510

	AM USB/LSB
C	4.9V
B	1.7V
E	1.1V

Q512

	SSB
C	4.67V
B	2.03V
E	1.39V

Q509

	AM
C	0V
B	0.7V
E	0V

Q511

	AM
C	4.66V
B	2.05V
E	1.41V

Q514

	AM
C	0.42V
B	1.04V
E	0.37V

Q505

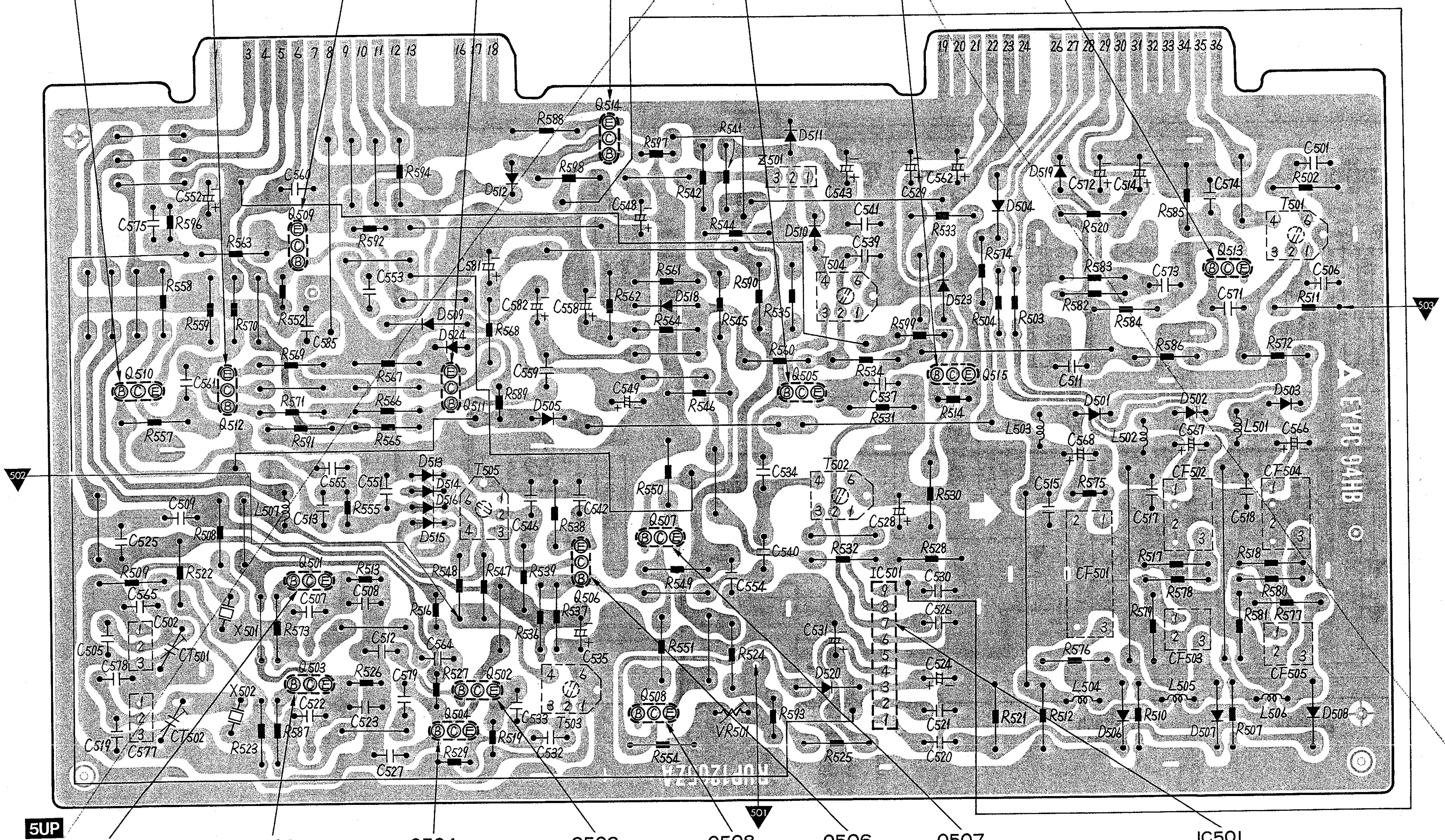
	AM
C	4.9V
B	1.2V
E	0.5V

Q515

	AM	SSB
C	0V	0V
B	0V	0.6V
E	0V	0V

Q513

	AM
C	4.9V
B	1.5V
E	0.8V


1
3 4 5 6 7 8 9 10 11 12 13
16 17 18
19 20 21 22 23 24
26 27 28 29 30 31 32 33 34 35 36
Q514
R588
R597
R541
D511
Z501
C543
C529
C562
D519
C512
C514
C501
R502
C560
R594
D512
R598
C548
R542
R544
D510
C541
C539
R533
D504
R520
R585
C574
T501
C552
C575
R596
Q509
R592
R563
C553
C581
C582
C558
R562
R561
D518
R590
R535
T504
D523
R574
R583
C573
Q513
C506
R558
R559
R570
R552
C585
D509
D524
R568
R564
R545
R599
R504
R503
R582
R584
C571
R511
R569
R567
Q510
C561
Q512
Q511
C559
R589
C549
R560
Q505
R534
Q515
R586
R572
C511
R571
R566
D505
R546
C537
R531
R514
D501
D502
D503
R557
R591
R565
L503
C568
L502
C567
L501
C566
D513
T505
D514
D516
C555
C551
C534
T502
C515
R575
CF502
CF504
C509
L507
C513
R555
C546
C542
R550
R530
C517
C518
C525
R508
D515
R538
Q507
C528
CF501
R509
R522
Q501
R513
C508
R548
R547
R539
C540
R532
R528
R517
R518
C565
C507
R516
Q506
R549
C554
IC501
C530
R578
R580
C502
X501
R573
C512
C564
R537
R536
C531
C526
R579
R581
R577
C505
C578
CT501
Q503
R526
C579
R527
Q502
C535
R551
R524
D520
C524
R576
CF503
CF505
X502
C522
C523
Q504
C533
T503
Q508
VR501
R593
L504
L505
L506
C519
C577
CT502
R523
R587
R529
R519
C532
C521
R521
R512
D506
R510
D507
R507
D508
C527
R554
R525
C520
502
503
501
EYPC 94HB

5UP

Q501

	AM USB	AM LSB
C	5.9V	5.9V
B	2.6V	0V
E	2V	0V

Q503

	AM USB	AM LSB
C	5.9V	5.9V
B	0V	2.6V
E	0V	2.0V

Q504

	AM USB	AM LSB
C	6V	6V
B	0V	3.8V
E	0V	3.1V

Q502

	AM USB	AM LSB
C	5.9V	5.9V
B	3.8V	0V
E	3.1V	0V

Q508

	AM
C	0V
B	5.6V
E	6V

Q506

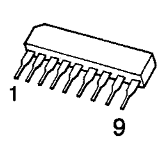
	AM USB/LSB
C	3.9V
B	1.7V
E	1V

Q507

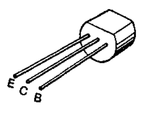
	AM
C	5.6V
B	0.7V
E	0.1V

IC501

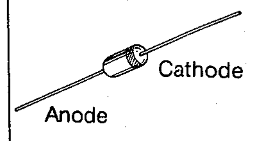
	1	2	3	4	5	6	7	8	9
AM	1.1V	1.1V	0V	0.5V	0V	0.2V	6.0V	6.0V	1.1V



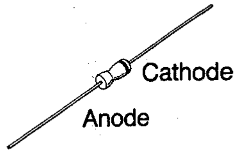
IC501



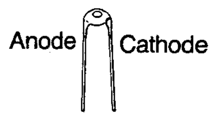
Q501~515


Cathode
Anode

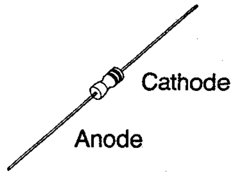
D501~509, 512, 518, 523


Cathode
Anode

D510, 519, 522

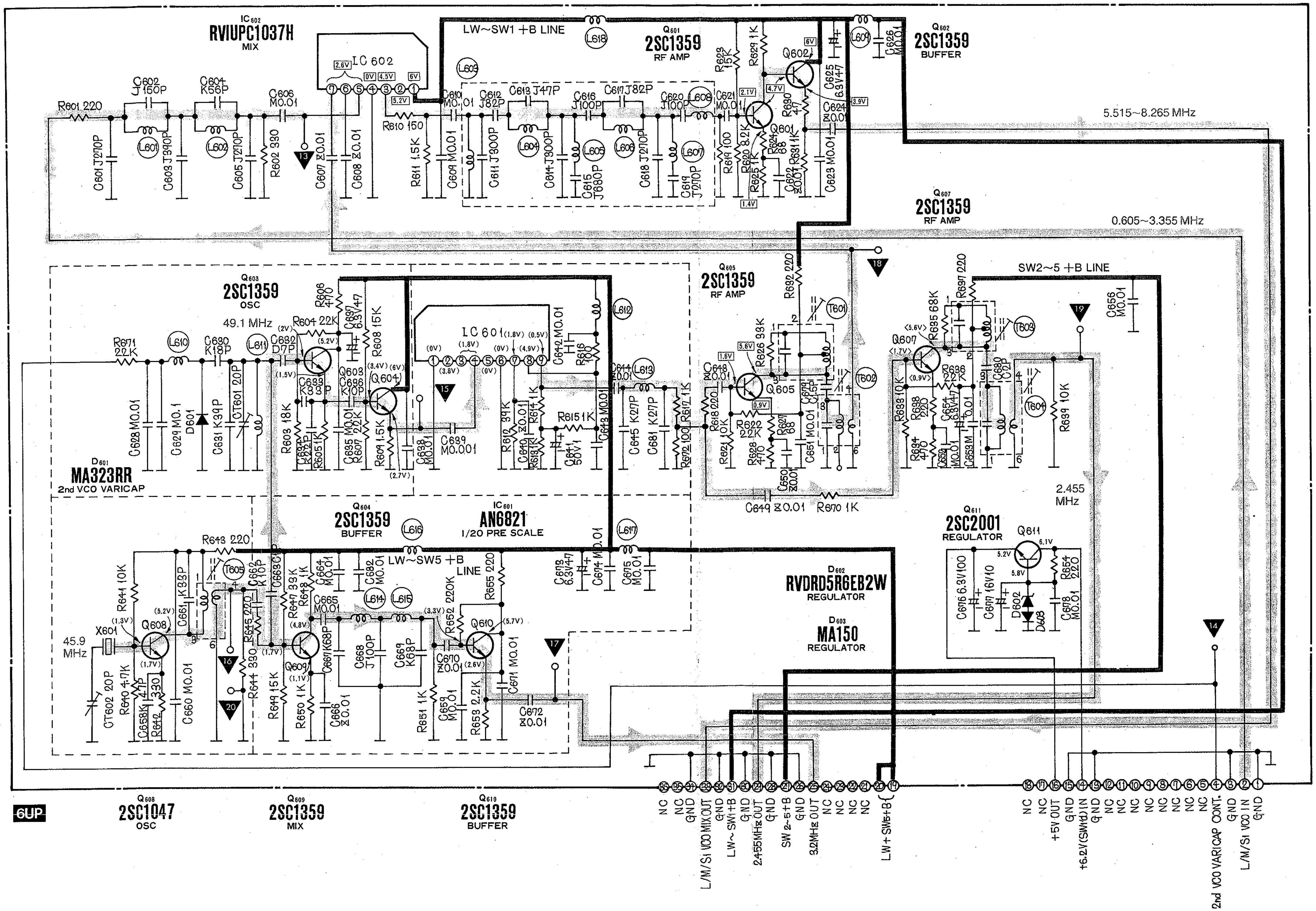

Anode
Cathode

D511

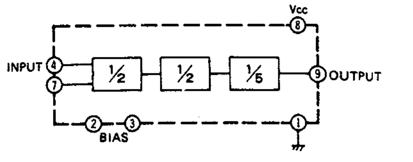

Cathode
Anode

D513~516

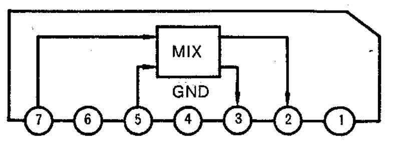
SCHEMATIC DIAGRAM (6 UP) . . . 2nd PLL, VCO & MIX CIRCUIT


IC602 RVIUPC1037H MIX
Q601 2SC1359 RF AMP
Q602 2SC1359 BUFFER
Q607 2SC1359 RF AMP
Q603 2SC1359 OSC
Q605 2SC1359 RF AMP
Q604 2SC1359 BUFFER
IC601 AN6821 1/20 PRE SCALE
D601 MA323RR 2nd VCO VARICAP
Q611 2SC2001 REGULATOR
D602 RVDRD5R6EB2W REGULATOR
D603 MA150 REGULATOR
Q608 2SC1047 OSC
Q609 2SC1359 MIX
Q610 2SC1359 BUFFER
6UP
LW~SW1 +B LINE
LW~SW5 +B LINE
SW2~5 +B LINE
5.515~8.265 MHz
0.605~3.355 MHz
49.1 MHz
45.9 MHz
2.455 MHz
NC
NC
GND
L/M/S1 VCO MIX OUT
GND
LW~SW1+B
GND
2.455MHz OUT
GND
SW 2~5+B
GND
3.2MHz OUT
NC
NC
NC
LW+SW5+B
NC
NC
+5V OUT
GND
+6.2V(SW1d) IN
NC
NC
NC
NC
NC
NC
NC
NC
2nd VCO VARICAP CONT.
GND
L/M/S1 VCO IN
GND

IC601 AN6821


Vcc
INPUT
½
½
⅕
OUTPUT
BIAS

IC602 RVIUPC1037H


MIX
GND
7
6
5
4
3
2
1

Notes:

1. The mark (▼) shows test point, e.g. ▼ =test point 1.
2. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
   ☐ . . . LW, MW, SW1 position, (   ) . . . AM position,
   〈 〉. . . SW2~SW5 position.

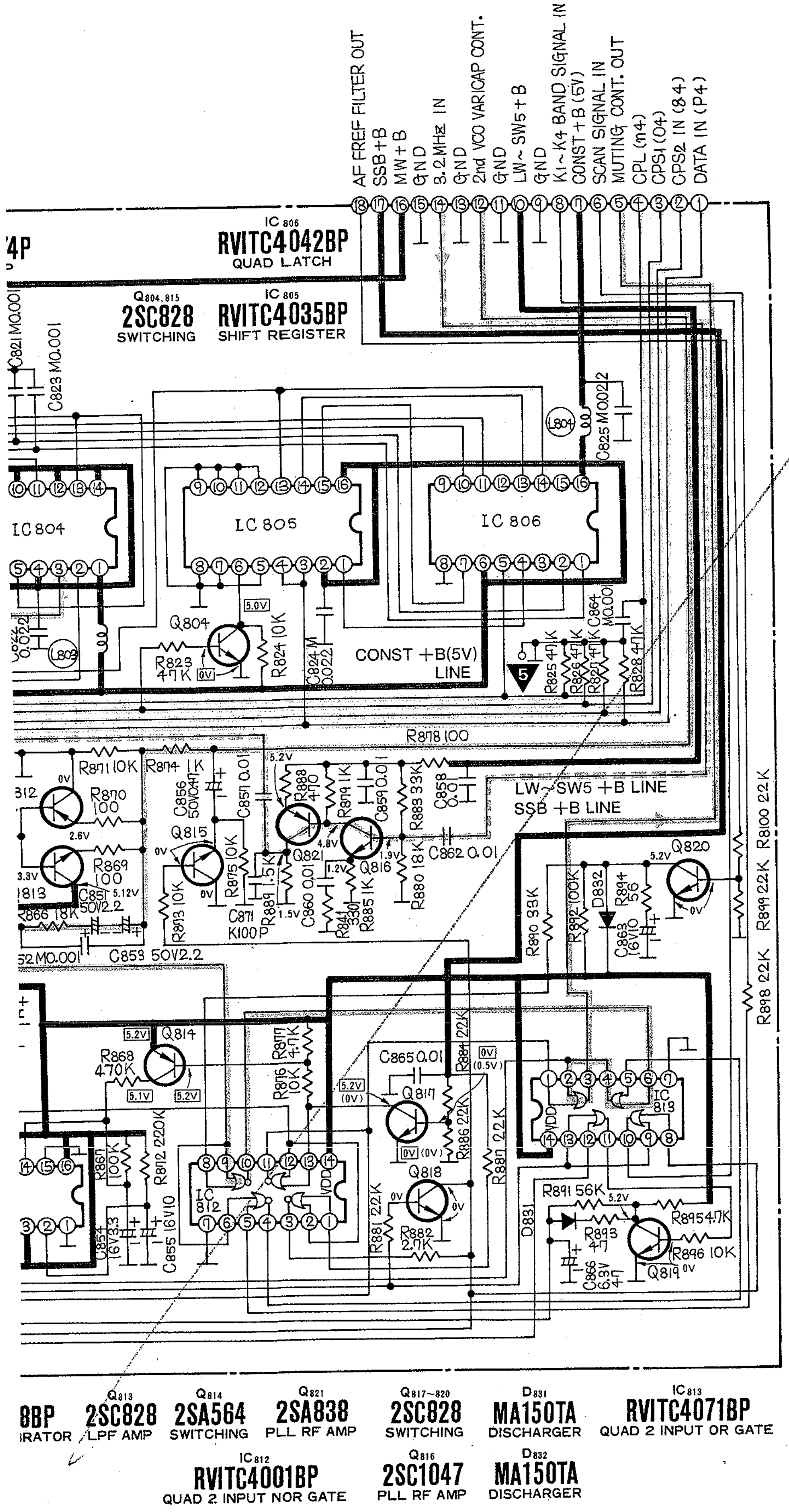
Bemerkungen:

1. Die Markierung (▼) bezeichnet einen Meßpunkt, z.B:▼= Meßpunkt 1.
2. Alle Gleichspannungen sind mit einem Elektronikvoltmeter vom negativen Batterieanschluß aus zu messen.
   ☐ . . . Stellung „LW, MW, KW1", (   ) . . . Stellung „AM",
   〈 〉. . . Stellung „KW2~KW5".

Remarques:

1. La marque (▼) signale un point de vérification. Ex.: ▼ =point de vérification 1.
2. La tension c.c. est mesurée au moyen d'un voltmétre électronique à partir de la borne négative de la pile.
   ☐ . . . Position GO, PO, OC1, (   ) . . . Position AM,
   〈 〉. . . Position OC2~OC5.

st, 2nd PLL & CONTROL CIRCUIT


AF FREF FILTER OUT
SSB+B
MW+B
GND
3.2MHz IN
GND
2nd VCO VARICAP CONT.
GND
LW~SW5+B
GND
K1~K4 BAND SIGNAL IN
CONST+B (5V)
SCAN SIGNAL IN
MUTING CONT. OUT
CPL (n4)
CPS1 (04)
CPS2 IN (84)
DATA IN (P4)
IC805 RVITC4042BP QUAD LATCH
Q804,815 2SC828 SWITCHING
IC805 RVITC4035BP SHIFT REGISTER
IC804
IC805
IC806
CONST +B(5V) LINE
LW~SW5 +B LINE
SSB +B LINE
Q804
Q812
Q813
Q814
Q815
Q816
Q817
Q818
Q819
Q820
Q821
IC812
IC813
D831
D832
L803
L804
R818 100
R8100 22K
R899 22K
R898 22K
Q813 2SC828 LPF AMP
Q814 2SA564 SWITCHING
Q821 2SA838 PLL RF AMP
Q817~820 2SC828 SWITCHING
D831 MA150TA DISCHARGER
IC813 RVITC4071BP QUAD 2 INPUT OR GATE
IC812 RVITC4001BP QUAD 2 INPUT NOR GATE
Q816 2SC1047 PLL RF AMP
D832 MA150TA DISCHARGER
8BP
RATOR

Notes:

1. The mark (▼) shows test point, e.g. ▼ =test point 1.
2. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
   ☐ . . . MW position, ( ) . . SSB position.

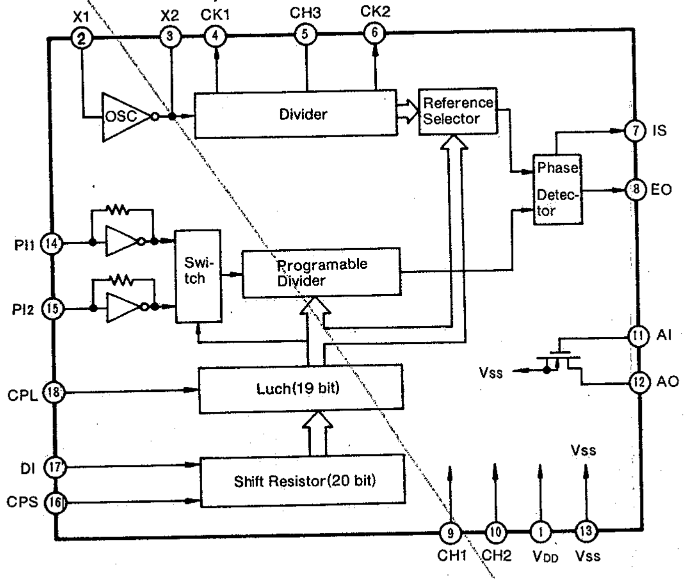
Bemerkungen:

1. Die Markierung (▼) bezeichnet einen Meßpunkt, z.B: ▼ = Meßpunkt 1.
2. Alle Gleichspannungen sind mit einem Elektronikvoltmeter vom negativen Batterieanschluß aus zu messen.
   ☐ . . Stellung „MW", ( )Stellung „SSB".

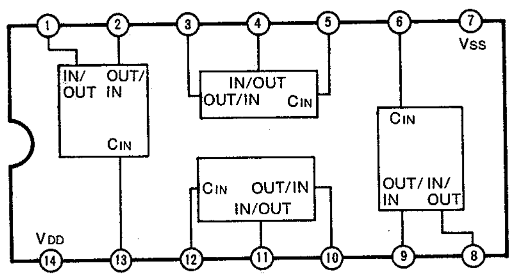
Remarques:

1. La marque (▼) signale un point de vérification. Ex.: ▼ =point de vérification 1.
2. La tension c.c. est mesurée au moyen d'un voltmétre électronique à partir de la borne négative de la pile.
   ☐ . . . Position PO, ( ) . . Position SSB.

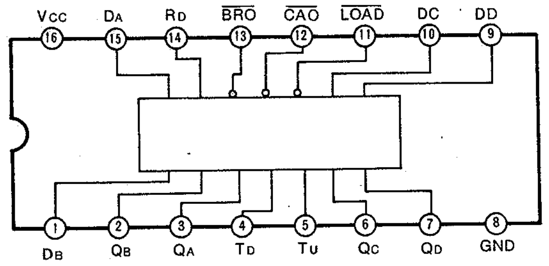
IC809, 810 RVIUPD2819C


X1
X2
CK1
CH3
CK2
OSC
Divider
Reference Selector
Phase Detector
IS
EO
PI1
PI2
Switch
Programable Divider
AI
AO
Vss
CPL
Luch(19 bit)
DI
CPS
Shift Resistor(20 bit)
CH1
CH2
VDD
Vss

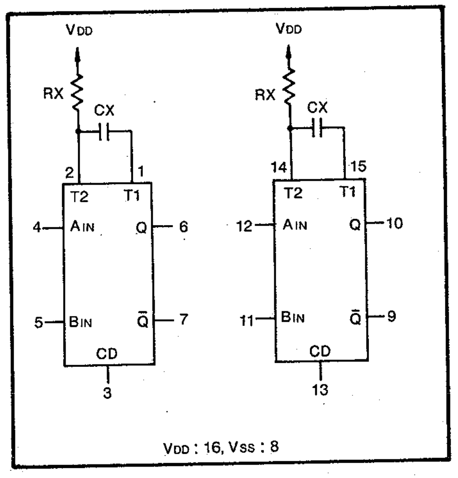
IC807 RVITC4016BP


IN/OUT
OUT/IN
CIN
Vss
VDD

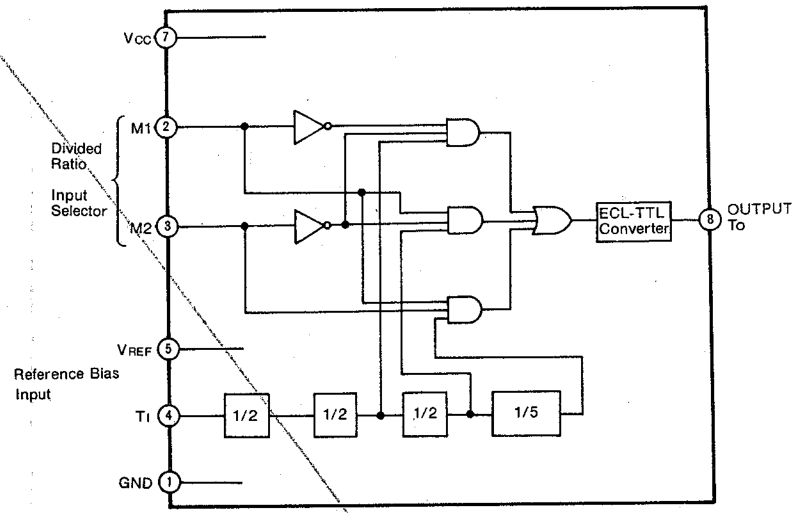
IC803 RVIM74LS192P


VCC
DA
RD
BRO
CAO
LOAD
DC
DD
DB
QB
QA
TD
TU
QC
QD
GND

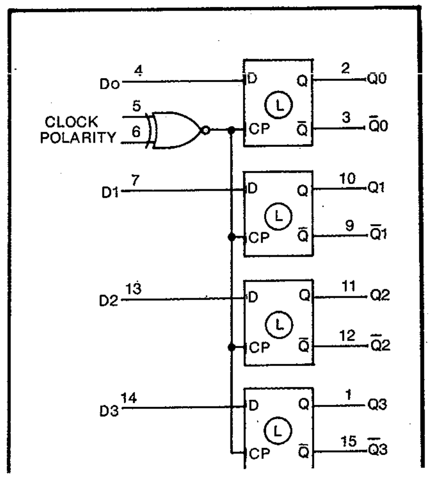
IC811 RVITC4528BP


VDD
RX
CX
T2
T1
AIN
Q
BIN
Q̄
CD
VDD : 16, Vss : 8

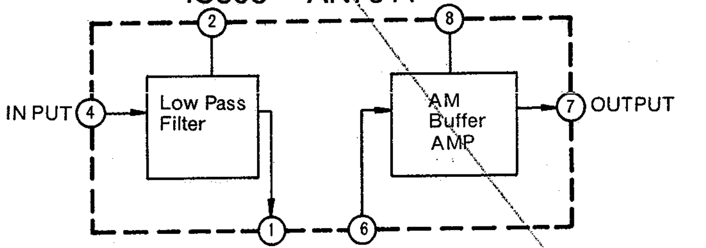
IC801 RVIM54455L


Vcc
M1
M2
Divided Ratio
Input Selector
ECL-TTL Converter
OUTPUT To
VREF
Reference Bias Input
TI
1/2
1/2
1/2
1/5
GND

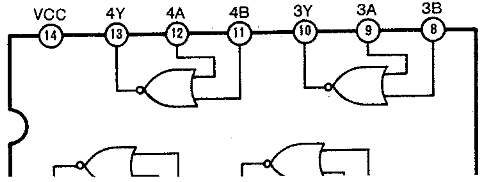
IC806 RVITC4042BP


Do
CLOCK POLARITY
D1
D2
D3
D
Q
CP
Q̄
Q0
Q̄0
Q1
Q̄1
Q2
Q̄2
Q3
Q̄3

IC808 AN7911


IN PUT
Low Pass Filter
AM Buffer AMP
OUTPUT

IC802 RVIM74LS02P


VCC
4Y
4A
4B
3Y
3A
3B

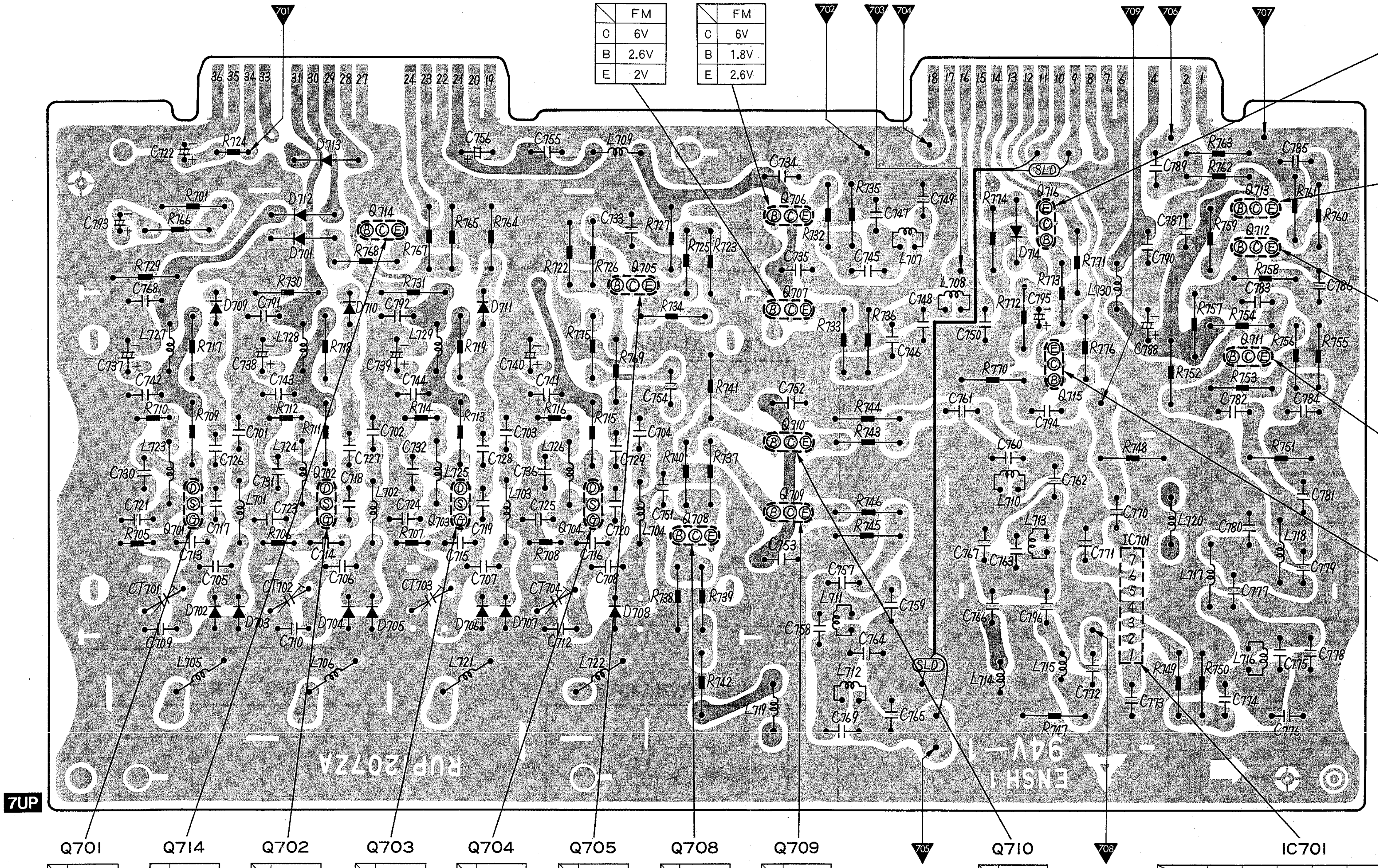
CIRCUIT BOARD WIRING VIEW (7 UP) . . . SW2~5, FM VCO, MIX & MUTING CIRCUIT

Q707

	FM
C	6V
B	2.6V
E	2V

Q706

	FM
C	6V
B	1.8V
E	2.6V


701
702
703
704
709
706
707
705
708
36 35 34 33 31 30 29 28 27 24 23 22 21 20 19
18 17 16 15 14 13 12 11 10 9 8 7 6 4 2 1
Q701
Q702
Q703
Q704
Q705
Q706
Q707
Q708
Q709
Q710
Q711
Q712
Q713
Q714
Q715
Q716
IC701
SLD
RUP 2072A
ENSH-1 94V-1
7UP

Q716

C	0V
B	6V
E	6.1V

Q713

	SW2~5
C	6V
B	5.2V
E	4.4V

Q712

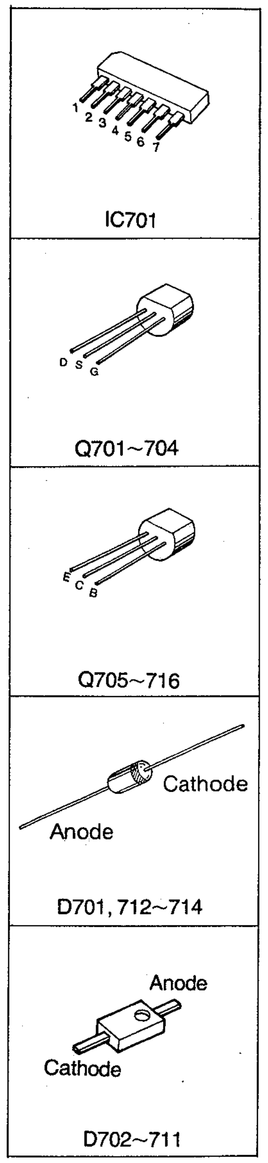
	SW2~5
C	5.2V
B	1.8V
E	1V

Q711

	SW2~5
C	5.2V
B	1.8V
E	1.1V

Q715

C	6V
B	0V
E	0V


1 2 3 4 5 6 7
IC701
D S G
Q701~704
E C B
Q705~716
Cathode
Anode
D701, 712~714
Anode
Cathode
D702~711

Q701

	SW2,3
D	4.6V
G	0V
S	0.4V

Q714

C	0V
B	0.5V
E	0V

Q702

	SW4
D	5.4V
G	0V
S	0.4V

Q703

	SW5
D	5.3V
G	0V
S	0.4V

Q704

	FM
D	5.5V
G	0V
S	0.5V

Q705

	FM
C	5.6V
B	3.5V
E	2.7V

Q708

	SW2~5
C	5.4V
B	3.3V
E	2.6V

Q709

	SW2~5
C	5.4V
B	2.6V
E	1.8V

Q710

	SW2~5
C	5.4V
B	1.7V
E	1V

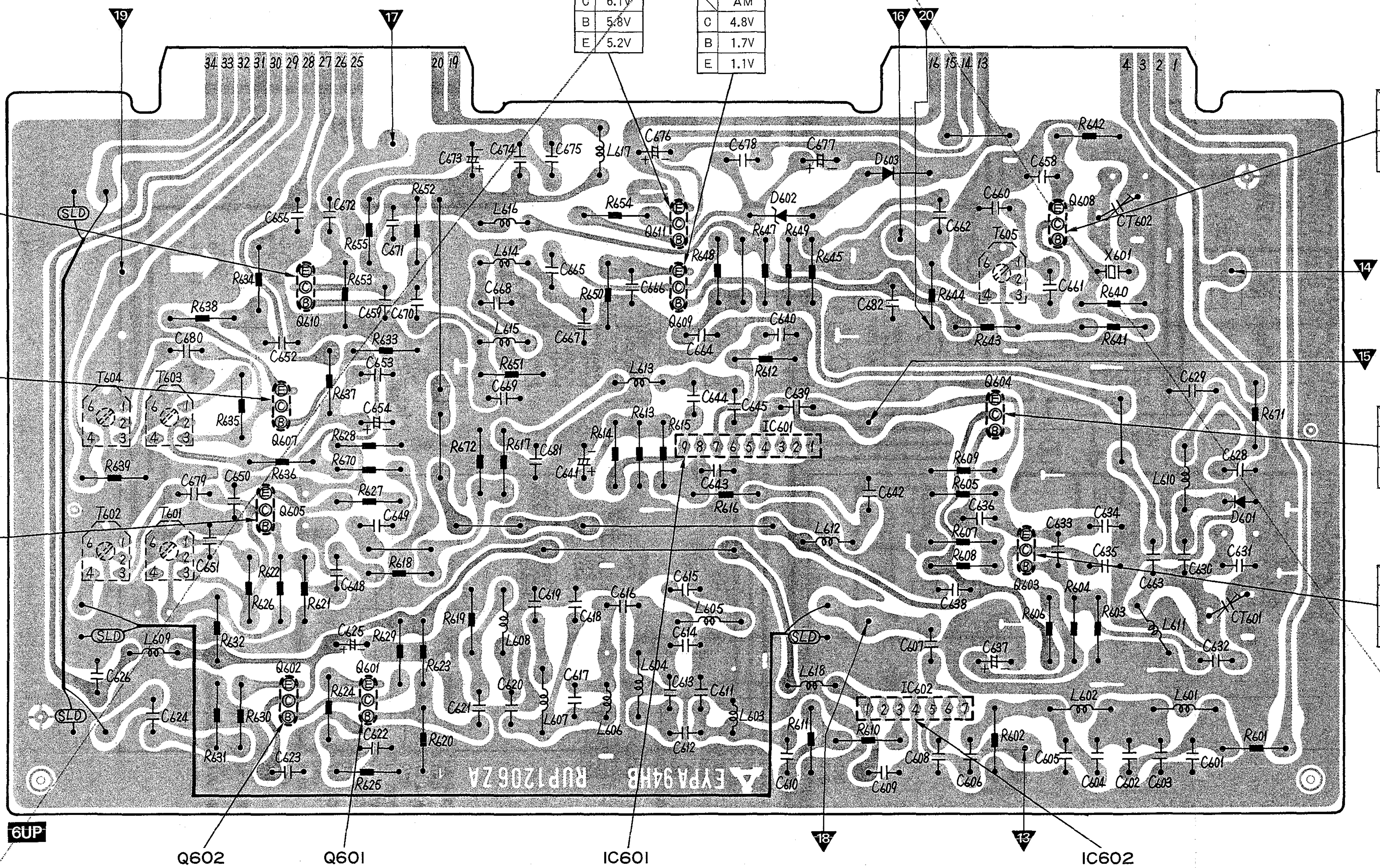
IC701

	1	2	3	4	5	6	7
SW2~5	5.9V	5.2V	4.5V	0V	2.6V	2.6V	2.6V

D3

D4

CIRCUIT BOARD WIRING VIEW (6 UP) . . . 2nd PLL, VCO & MIX CIRCUIT


34 33 32 31 30 29 28 27 26 25
20 19
16 15 14 13
4 3 2 1
19
17
16
20
14
15
18
13
SLD
IC601
IC602
T601
T602
T603
T604
T605
X601
CT601
CT602
D601
D602
D603
EYPA94HB RUP1206ZA
6UP

Q611

C	6.1V
B	5.8V
E	5.2V

Q609

	AM
C	4.8V
B	1.7V
E	1.1V

Q608

	AM
C	5.2V
B	1.3V
E	1.7V

Q610

	AM
C	5.7V
B	3.3V
E	2.6V

Q607

	SW2~5
C	5.6V
B	1.7V
E	0.9V

Q605

	LW,MW,SW1
C	5.6V
B	1.6V
E	0.9V

Q604

	AM
C	6V
B	3.4V
E	2.7V

Q603

	AM
C	5.2V
B	2V
E	1.5V

Q602

	LW,MW,SW1
C	6V
B	4.7V
E	3.9V

Q601

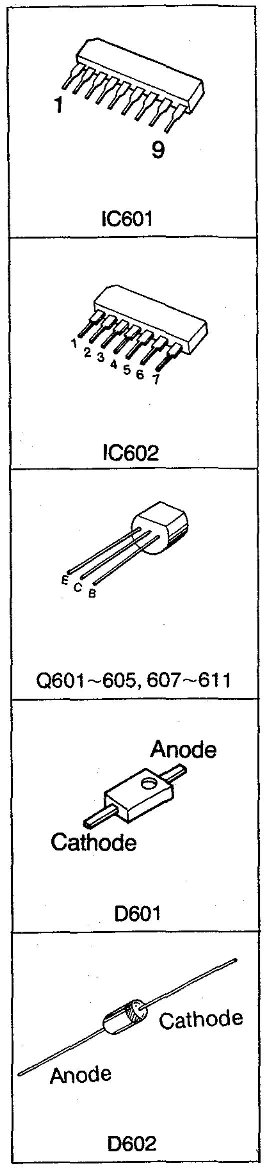
	LW,MW,SW1
C	4.7V
B	2.1V
E	1.4V

IC601

	1	2	3	4	5	6	7	8	9
AM	0V	3.8V	1.8V	1.8V	0V	0V	1.8V	4.9V	0.5V

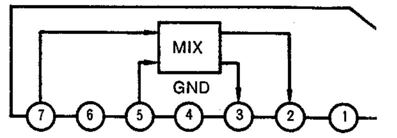
IC602

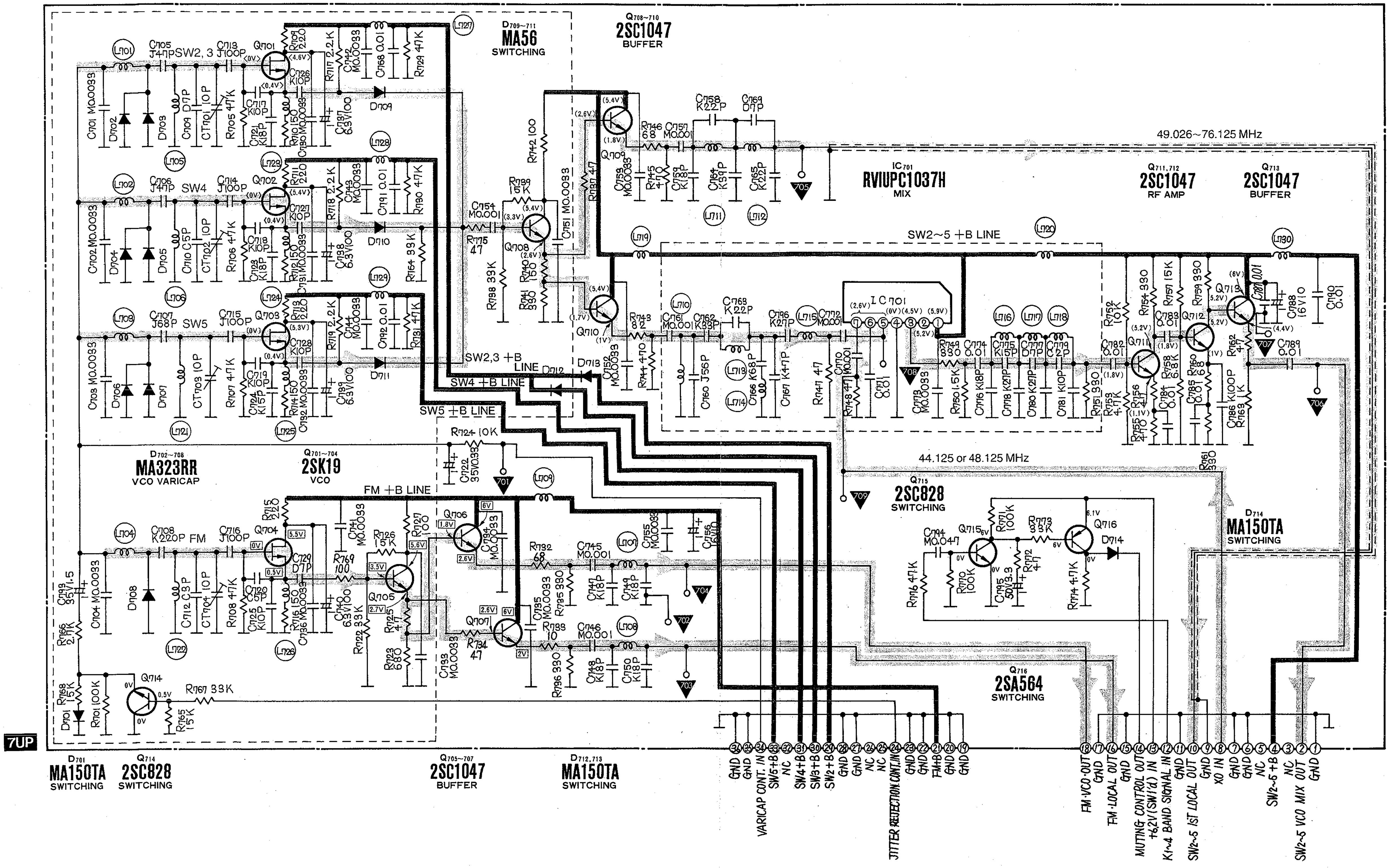
	1	2	3	4	5	6	7
LW,MW,SW1	6V	5.2V	4.5V	0V	2.6V	2.6V	2.6V


1
9
IC601
1 2 3 4 5 6 7
IC602
E C B
Q601~605, 607~611
Anode
Cathode
D601
Cathode
Anode
D602

SCHEMATIC DIAGRAM (7 UP) . . . SW2~5, FM VCO, MIX & MUTING CIRCUIT

IC701 RVIUPC1037H


MIX
GND
⑦ ⑥ ⑤ ④ ③ ② ①


7UP
D709~711 MA56 SWITCHING
Q708~710 2SC1047 BUFFER
IC701 RVIUPC1037H MIX
Q711,712 2SC1047 RF AMP
Q713 2SC1047 BUFFER
49.026~76.125 MHz
SW2~5 +B LINE
SW2,3 +B LINE
SW4 +B LINE
SW5 +B LINE
FM +B LINE
44.125 or 48.125 MHz
D702~708 MA323RR VCO VARICAP
Q701~704 2SK19 VCO
Q715 2SC828 SWITCHING
D714 MA150TA SWITCHING
Q716 2SA564 SWITCHING
D701 MA150TA SWITCHING
Q714 2SC828 SWITCHING
Q705~707 2SC1047 BUFFER
D712,713 MA150TA SWITCHING
SW2, 3
SW4
SW5
FM
GND
GND
VARICAP CONT. IN
SW5+B
NC
SW4+B
SW3+B
SW2+B
GND
GND
NC
NC
JITTER REJECTION CONT. IN
GND
GND
FM+B
GND
GND
FM-VCO-OUT
GND
FM-LOCAL OUT
GND
MUTING CONTROL OUT
+6.2V (SW1/4) IN
K1~4 BAND SIGNAL IN
GND
SW2~5 1ST LOCAL OUT
GND
XO IN
GND
GND
NC
SW2~5 +B
NC
SW2~5 VCO MIX OUT
GND

Notes:

1. The mark (▼) shows test point, e.g. ▼=test point 1.
2. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
   ▭ . . . FM position, ( ) . . . SW2~SW5 position,
   ⟨ ⟩ . . . SW2, 3 position, ⟪ ⟫ . . . SW4 position,
   [ ] . . . SW5 position.

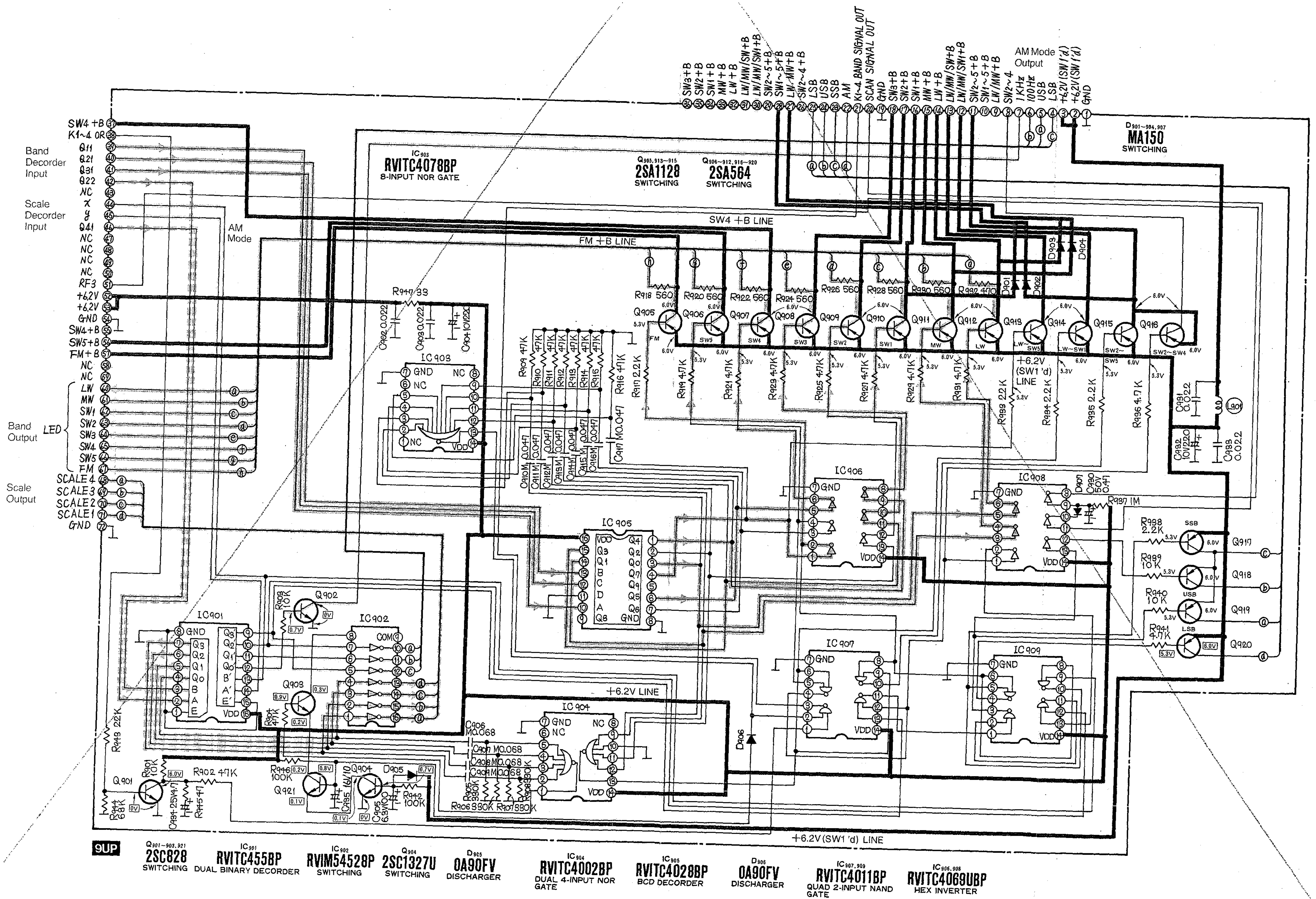
Bemerkungen:

1. Die Markierung (▼) bezeichnet einen Meßpunkt, z.B: ▼= Meßpunkt 1.
2. Alle Gleichspannungen sind mit einem Elektronikvoltmeter vom negativen Batterieanschluß aus zu messen.
   ▭ . . . Stellung „FM", ( ) . . . Stellung „KW2~KW5",
   ⟨ ⟩ . . . Stellung „KW2, KW3", ⟪ ⟫ . . . Stellung „KW4",
   [ ] . . . Stellung „KW5".

Remarques:

1. La marque (▼) signale un point de vérification. Ex.: ▼ =point de vérification 1.
2. La tension c.c. est mesurée au moyen d'un voltmétre électronique à partir de la borne négative de la pile.
   ▭ . . . Position FM, ( ) . . . Position OC2~OC5,
   ⟨ ⟩ . . . Position OC2, OC3, ⟪ ⟫ . . . Position OC4,
   [ ] . . . Stellung OC5.

SCHEMATIC DIAGRAM (9 UP) . . . RADIO CONTROL-2 CIRCUIT

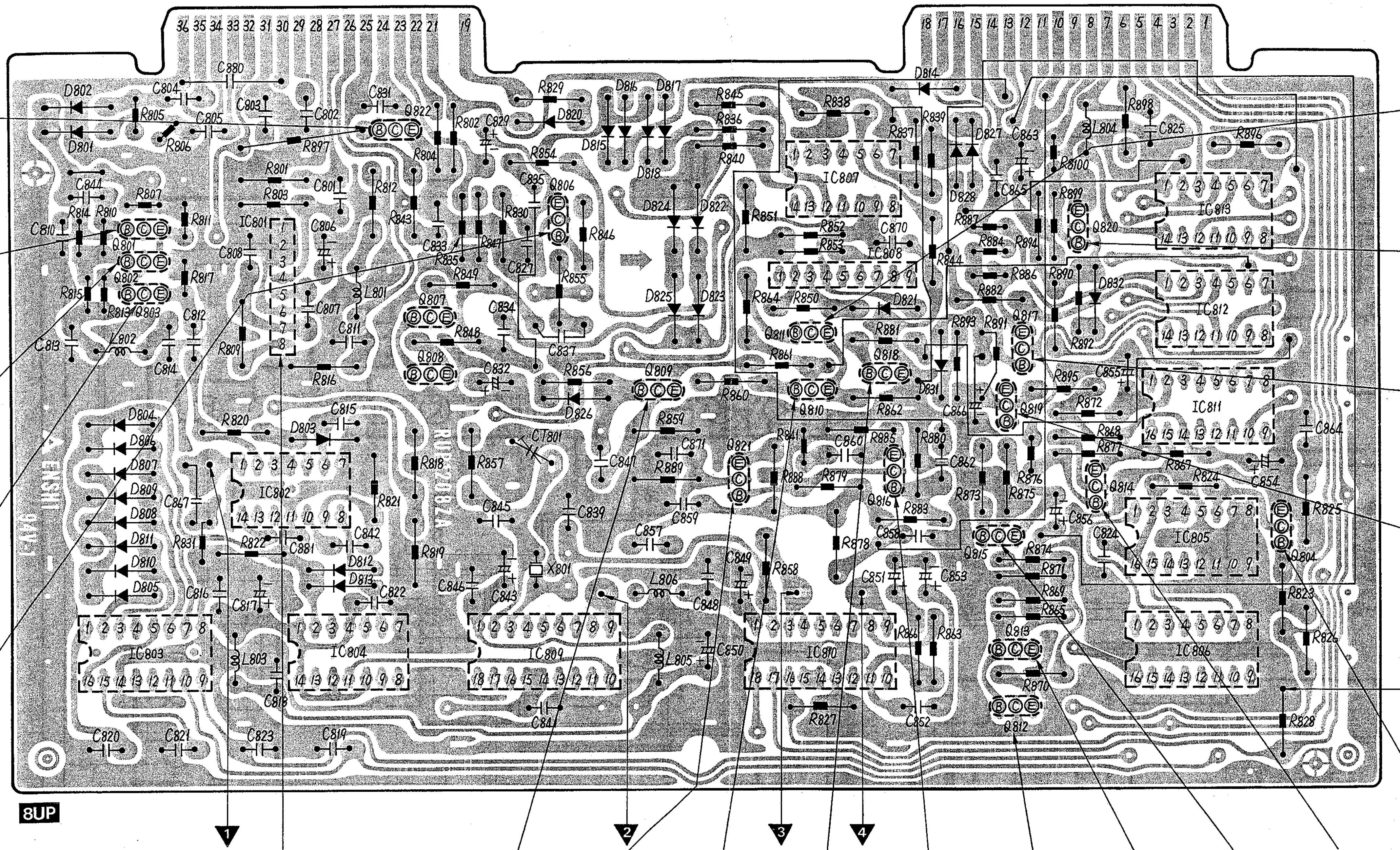

SW3+B ㊱
SW2+B ㉟
SW1+B ㉞
MW+B ㉝
LW+B ㉜
LW/MW/SW+B ㉛
LW/MW/SW1+B ㉚
SW2~5+B ㉙
SW1~5+B ㉘
LW/MW+B ㉗
SW2~4+B ㉖
LSB ㉕
USB ㉔
SSB ㉓
AM ㉒
K1~4 BAND SIGNAL OUT ㉑
SCAN SIGNAL OUT ⑳
GND ⑲
SW3+B ⑱
SW2+B ⑰
SW1+B ⑯
MW+B ⑮
LW+B ⑭
LW/MW/SW+B ⑬
LW/MW/SW1+B ⑫
SW2~5+B ⑪
SW1~5+B ⑩
LW/MW+B ⑨
SW2~4 ⑧
1KHz ⑦
100Hz ⑥
USB ⑤
LSB ④
AM Mode Output
+6.2V (SW1'd) ③
+6.2V (SW1'd) ②
GND ①
SW4 +B (37)
K1~4 OR (38)
Band Decorder Input
Q11 (39)
Q21 (40)
Q31 (41)
Q22 (42)
NC (43)
Scale Decorder Input
x (44)
y (45)
Q41 (46)
NC (47)
NC (48)
NC (49)
NC (50)
RF3 (51)
+6.2V (52)
+6.2V (53)
GND (54)
SW4+B (55)
SW5+B (56)
FM+B (57)
NC (58)
NC (59)
Band Output
LED
LW (60)
MW (61)
SW1 (62)
SW2 (63)
SW3 (64)
SW4 (65)
SW5 (66)
FM (67)
Scale Output
SCALE 4 (68)
SCALE 3 (69)
SCALE 2 (70)
SCALE 1 (71)
GND (72)
AM Mode
IC903 RVITC4078BP 8-INPUT NOR GATE
Q905, 913~915 2SA1128 SWITCHING
Q906~912, 916~920 2SA564 SWITCHING
D901~904, 907 MA150 SWITCHING
SW4 +B LINE
FM +B LINE
+6.2V (SW1'd) LINE
+6.2V LINE
+6.2V (SW1 'd) LINE
IC903
IC904
IC905
IC906
IC907
IC908
IC909
IC901
IC902
Q901
Q902
Q903
Q904
Q905
Q906
Q907
Q908
Q909
Q910
Q911
Q912
Q913
Q914
Q915
Q916
Q917
Q918
Q919
Q920
Q921
D903
D904
D905
D906
L901
SSB
USB
LSB
9UP
Q901~903, 921 2SC828 SWITCHING
IC901 RVITC455BP DUAL BINARY DECORDER
IC902 RVIM54528P SWITCHING
Q904 2SC1327U SWITCHING
D905 0A90FV DISCHARGER
IC904 RVITC4002BP DUAL 4-INPUT NOR GATE
IC905 RVITC4028BP BCD DECORDER
D906 0A90FV DISCHARGER
IC907, 909 RVITC4011BP QUAD 2-INPUT NAND GATE
IC906, 908 RVITC4069UBP HEX INVERTER

Note:
DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
☐ . . AM position,

Bemerkungen:
Alle Gleichspannungen sind mit einem Elektronikvoltmeter vom negativen Batterieanschluß aus zu messen.
☐ . . Stellung „AM",

Remarque:
La tension c.c. est mesurée au moyen d'un voltmétre électronique à partir e la borne négative de la pile.
☐ . . Position AM,

CIRCUIT BOARD WIRING VIEW (8 UP) . . . 1st, 2nd PLL & CONTROL CIRCUIT


34 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 19
18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
IC801
IC802
IC803
IC804
IC805
IC806
IC807
IC808
IC809
IC810
IC811
IC812
IC813
X801
CT801
8UP
1
2
3
4
5

Q822

	AM
C	0.7V
B	0V
E	0V

Q801

	AM
C	5.89V
B	2.09V
E	1.34V

Q802

	AM
C	4.15V
B	2.09V
E	1.34V

Q803

	AM
C	5.89V
B	4.15V
E	3.94V

Q806

	AM
C	0V
B	0V
E	0V

Q811

	AM
C	5.1V
B	4.2V
E	3.5V

Q820

	AM
C	5.2V
B	0V
E	0V

Q817

	MW	SSB
C	5.2V	0V
B	0V	0.7V
E	0V	0V

Q819

	AM
C	5.2V
B	0V
E	0V

804

	MW
C	5.0V
B	0V
E	0V

IC801

	1	2	3	4	5	6	7	8
AM	0V	0V	0V	2.8V	2.8V	0V	5.7V	0.6V

Q809

	AM
C	0V
B	5.0V
E	5.1V

Q821

	AM
C	1.5V
B	4.8V
E	5.2V

Q810

	AM
C	5.0V
B	0V
E	3.5V

Q818

	AM
C	0V
B	0V
E	0V

Q816

	AM
C	4.8V
B	1.9V
E	1.2V

Q812

	AM
C	0V
B	3.3V
E	2.6V

Q813

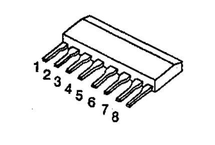
	AM
C	5.12V
B	3.3V
E	2.6V

Q815

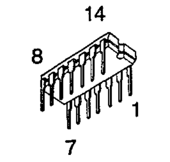
	AM
C	0V
B	0V
E	0V

Q814

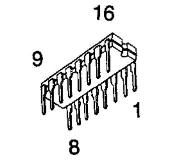
	MW
C	5.1V
B	5.2V
E	5.2V



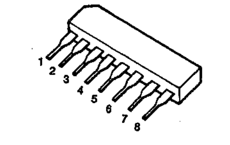
IC801



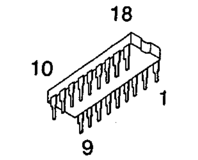
IC802, 804, 807, 812, 813



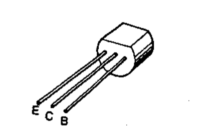
IC803, 805, 806, 811



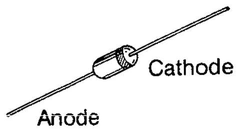
IC808



IC809, 810

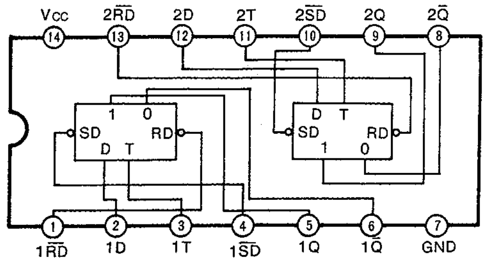


Q801~804, 806~822

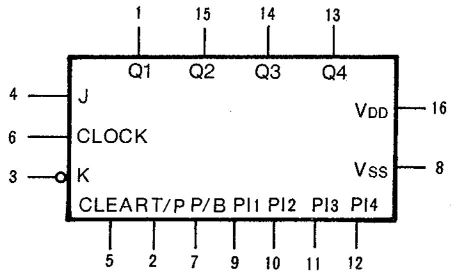

Cathode
Anode

D801~818, 820~828, 831, 832

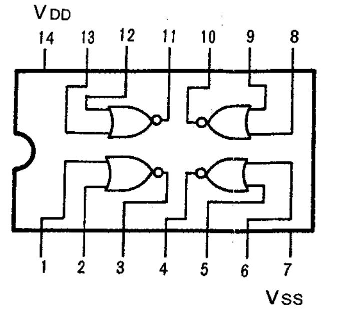
IC804 RVIM74LS74P


Vcc
2RD
2D
2T
2SD
2Q
2Q
14
13
12
11
10
9
8
1
0
SD
RD
D T
D T
SD
RD
1 0
1
2
3
4
5
6
7
1RD
1D
1T
1SD
1Q
1Q
GND

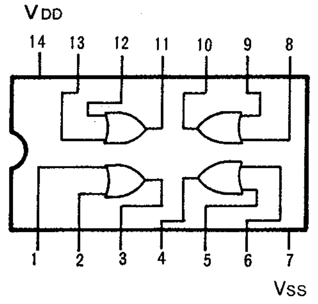
IC805 RVITC4035BP


1 15 14 13
Q1 Q2 Q3 Q4
4 J
6 CLOCK
3 K
VDD 16
Vss 8
CLEART/P P/B PI1 PI2 PI3 PI4
5 2 7 9 10 11 12

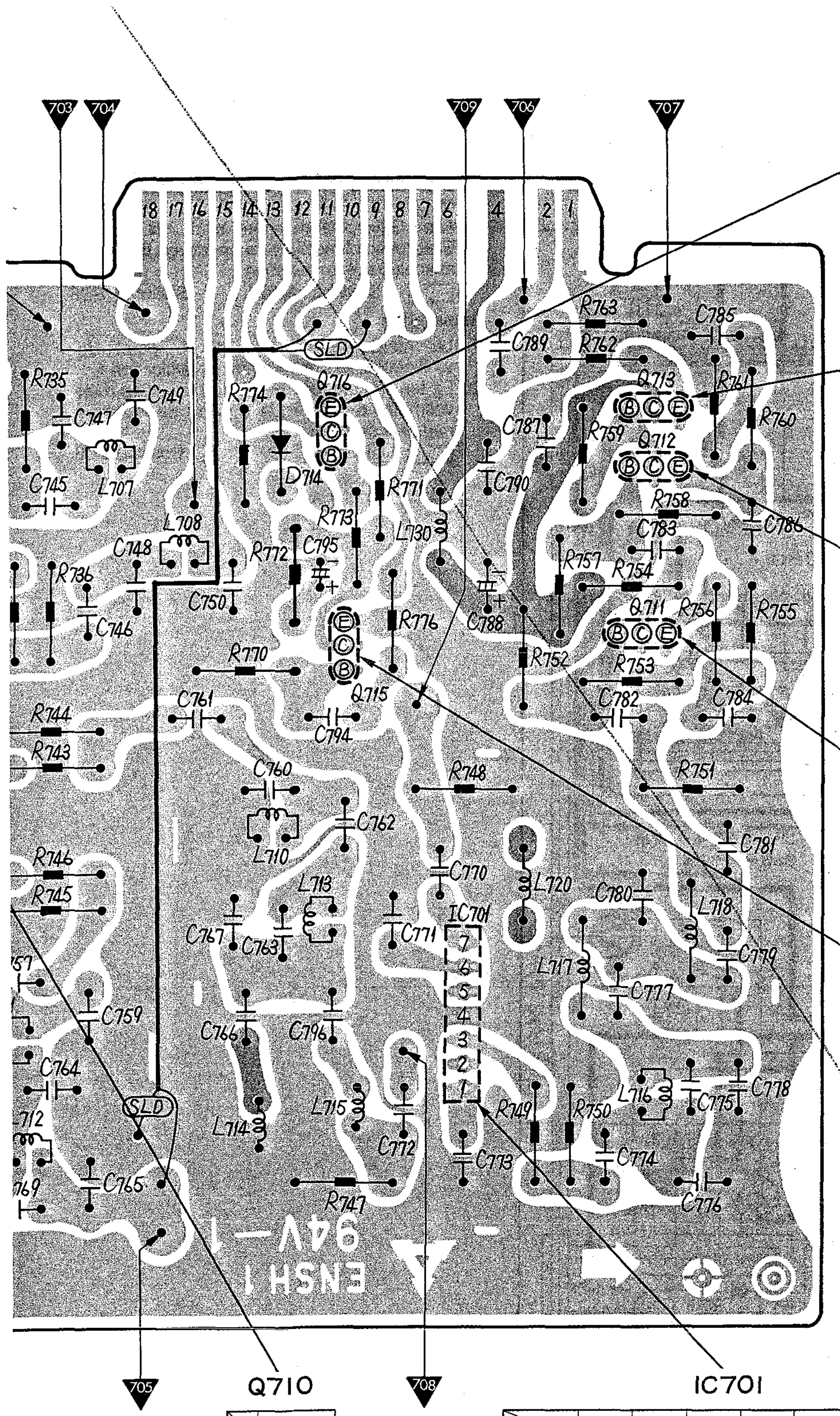
IC812 RVITC4001BP


VDD
14 13 12 11 10 9 8
1 2 3 4 5 6 7
Vss

IC813 RVITC4071BP


VDD
14 13 12 11 10 9 8
1 2 3 4 5 6 7
Vss

. . SW2~5, FM VCO, MIX & MUTING CIRCUIT


703
704
709
706
707
705
708
18 17 16 15 14 13 12 11 10 9 8 7 6 4 2 1
SLD
Q716
E C B
R735
C749
C747
L707
C745
R774
D714
R773
R771
L730
R772
C795
C748
L708
R736
C746
C750
Q715
E C B
R776
C788
R770
C761
C794
R744
R743
C760
L710
C762
R748
R746
R745
L713
C767
C763
C770
IC701
C771
7 6 5 4 3 2 1
C759
C764
C766
C796
L714
L715
C772
C773
C765
R747
C789
R763
R762
C785
Q713
B C E
R761
R760
C787
R759
Q712
B C E
C790
R758
C783
C786
R757
R754
Q711
B C E
R756
R755
R752
R753
C782
C784
R751
C781
L720
C780
L718
L717
C779
C777
L716
C775
C778
R749
R750
C774
C776
ENSH 1
94V-1

Q716

C	0V
B	6V
E	6.1V

Q713

	SW2~5
C	6V
B	5.2V
E	4.4V

Q712

	SW2~5
C	5.2V
B	1.8V
E	1V

Q711

	SW2~5
C	5.2V
B	1.8V
E	1.1V

Q715

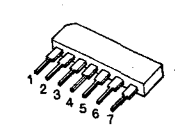
C	6V
B	0V
E	0V

Q710

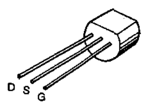
	SW2~5
C	5.4V
B	1.7V
E	1V

IC701

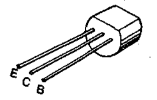
	1	2	3	4	5	6	7
SW2~5	5.9V	5.2V	4.5V	0V	2.6V	2.6V	2.6V



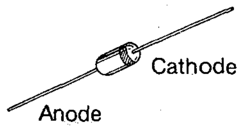
IC701



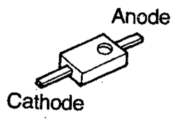
Q701~704



Q705~716

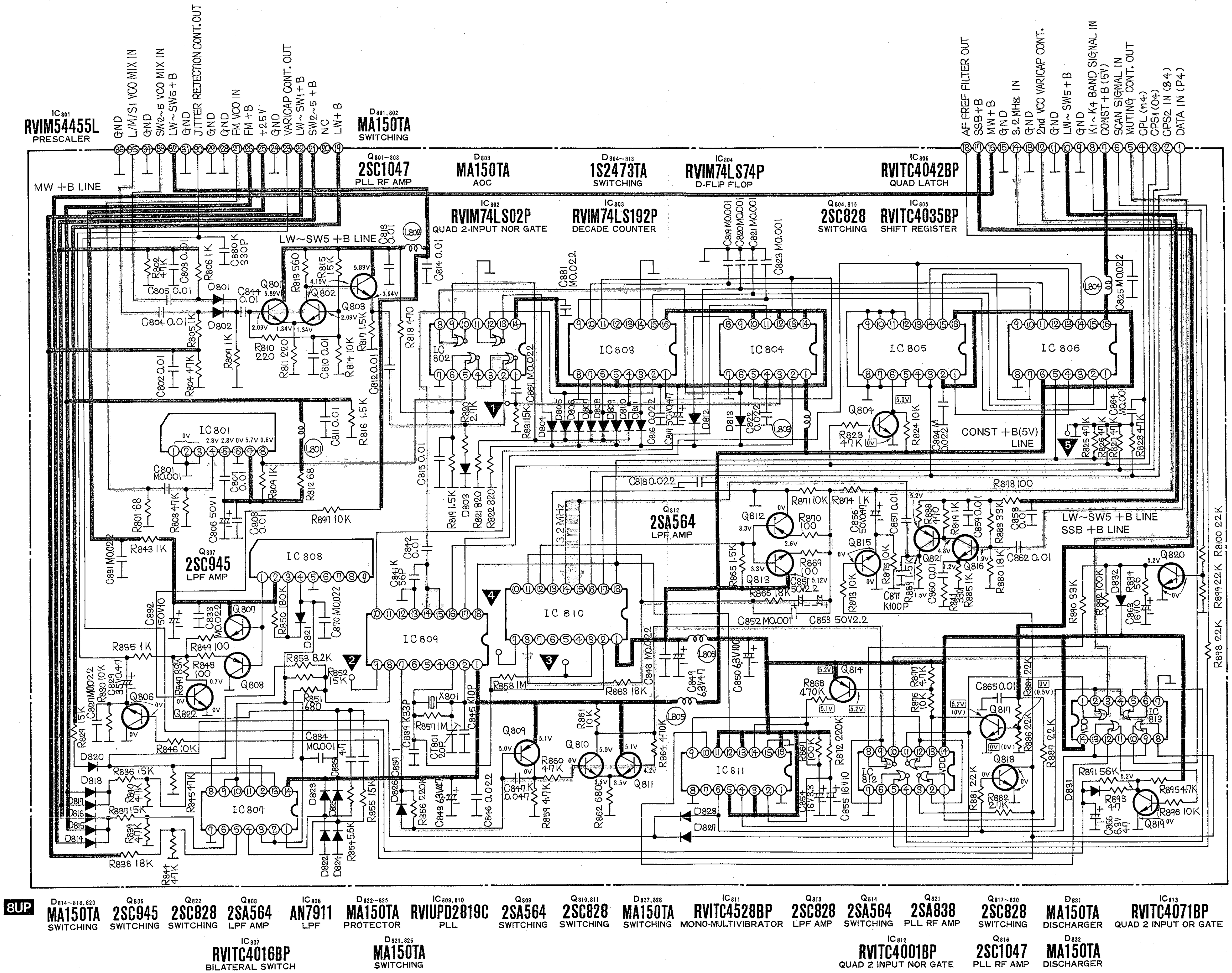

Cathode
Anode

D701, 712~714


Anode
Cathode

D702~711

SCHEMATIC DIAGRAM (8 UP) . . . 1st, 2nd PLL & CONTROL CIRCUIT


IC801 RVIM54455L PRESCALER
GND
L/M/S1 VCO MIX IN
GND
SW2~5 VCO MIX IN
LW~SW5+B
GND
JITTER REJECTION CONT. OUT
GND
GND
FM VCO IN
FM +B
+25V
GND
VARICAP CONT. OUT
LW~SW1+B
SW2~5+B
NC
LW+B
36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19
D801, 802 MA150TA SWITCHING
Q801~803 2SC1047 PLL RF AMP
D803 MA150TA AOC
D804~813 1S2473TA SWITCHING
IC804 RVIM74LS74P D-FLIP FLOP
IC806 RVITC4042BP QUAD LATCH
IC802 RVIM74LS02P QUAD 2-INPUT NOR GATE
IC803 RVIM74LS192P DECADE COUNTER
Q804, 815 2SC828 SWITCHING
IC805 RVITC4035BP SHIFT REGISTER
AF FREF FILTER OUT
SSB+B
MW+B
GND
3.2MHz IN
GND
2nd VCO VARICAP CONT.
GND
LW~SW5+B
GND
K1~K4 BAND SIGNAL IN
CONST+B (5V)
SCAN SIGNAL IN
MUTING CONT. OUT
CPL (n4)
CPS1 (O4)
CPS2 IN (Q4)
DATA IN (P4)
18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
MW +B LINE
LW~SW5 +B LINE
CONST +B(5V) LINE
LW~SW5 +B LINE
SSB +B LINE
IC801
IC802
IC803
IC804
IC805
IC806
IC807
IC808
IC809
IC810
IC811
IC812
IC813
Q801
Q802
Q803
Q804
Q806
Q807
Q808
Q809
Q810
Q811
Q812
Q813
Q814
Q815
Q816
Q817
Q818
Q819
Q820
Q821
Q822
Q807 2SC945 LPF AMP
Q812 2SA564 LPF AMP
X801
CT801 20P
L801
L802
L803
L804
L805
L806
1
2
3
4
5
D814~818, 820 MA150TA SWITCHING
Q806 2SC945 SWITCHING
Q822 2SC828 SWITCHING
Q808 2SA564 LPF AMP
IC808 AN7911 LPF
D822~825 MA150TA PROTECTOR
IC809, 810 RVIUPD2819C PLL
Q809 2SA564 SWITCHING
Q810, 811 2SC828 SWITCHING
D827, 828 MA150TA SWITCHING
IC811 RVITC4528BP MONO-MULTIVIBRATOR
Q813 2SC828 LPF AMP
Q814 2SA564 SWITCHING
Q821 2SA838 PLL RF AMP
Q817~820 2SC828 SWITCHING
D831 MA150TA DISCHARGER
IC813 RVITC4071BP QUAD 2 INPUT OR GATE
IC807 RVITC4016BP BILATERAL SWITCH
D821, 826 MA150TA SWITCHING
IC812 RVITC4001BP QUAD 2 INPUT NOR GATE
Q816 2SC1047 PLL RF AMP
D832 MA150TA DISCHARGER
8UP

Notes:

1. The mark (▼) shows test point, e.g. ▼ =test point 1.
2. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
   ☐ . . . MW position, ( ) . . SSB position.

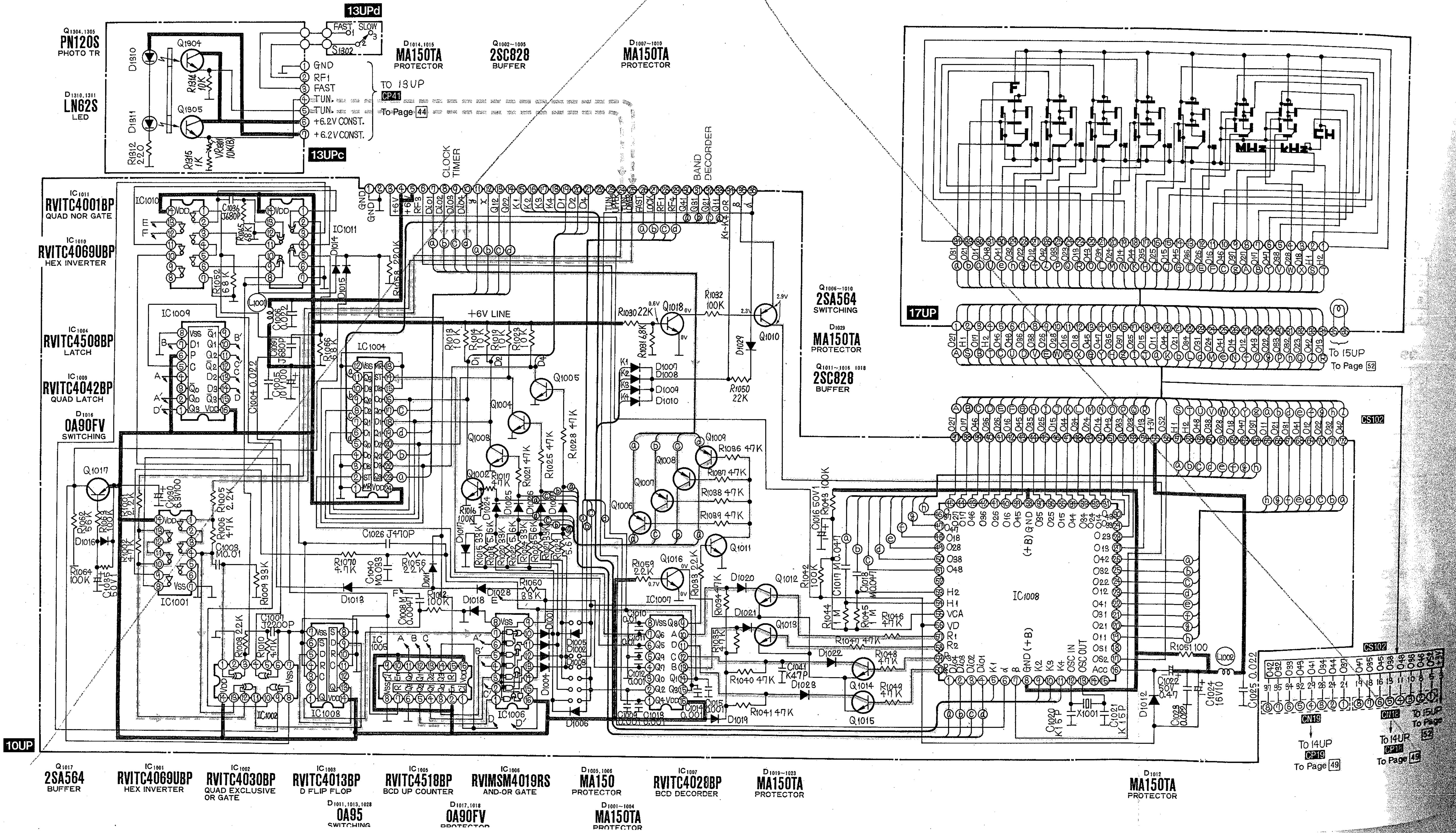
Bemerkungen:

1. Die Markierung (▼) bezeichnet einen Meßpunkt, z.B: ▼ = Meßpunkt 1.
2. Alle Gleichspannungen sind mit einem Elektronikvoltmeter vom negativen Batterieanschluß aus zu messen.
   ☐ . . Stellung „MW", ( )Stellung „SSB".

Remarques:

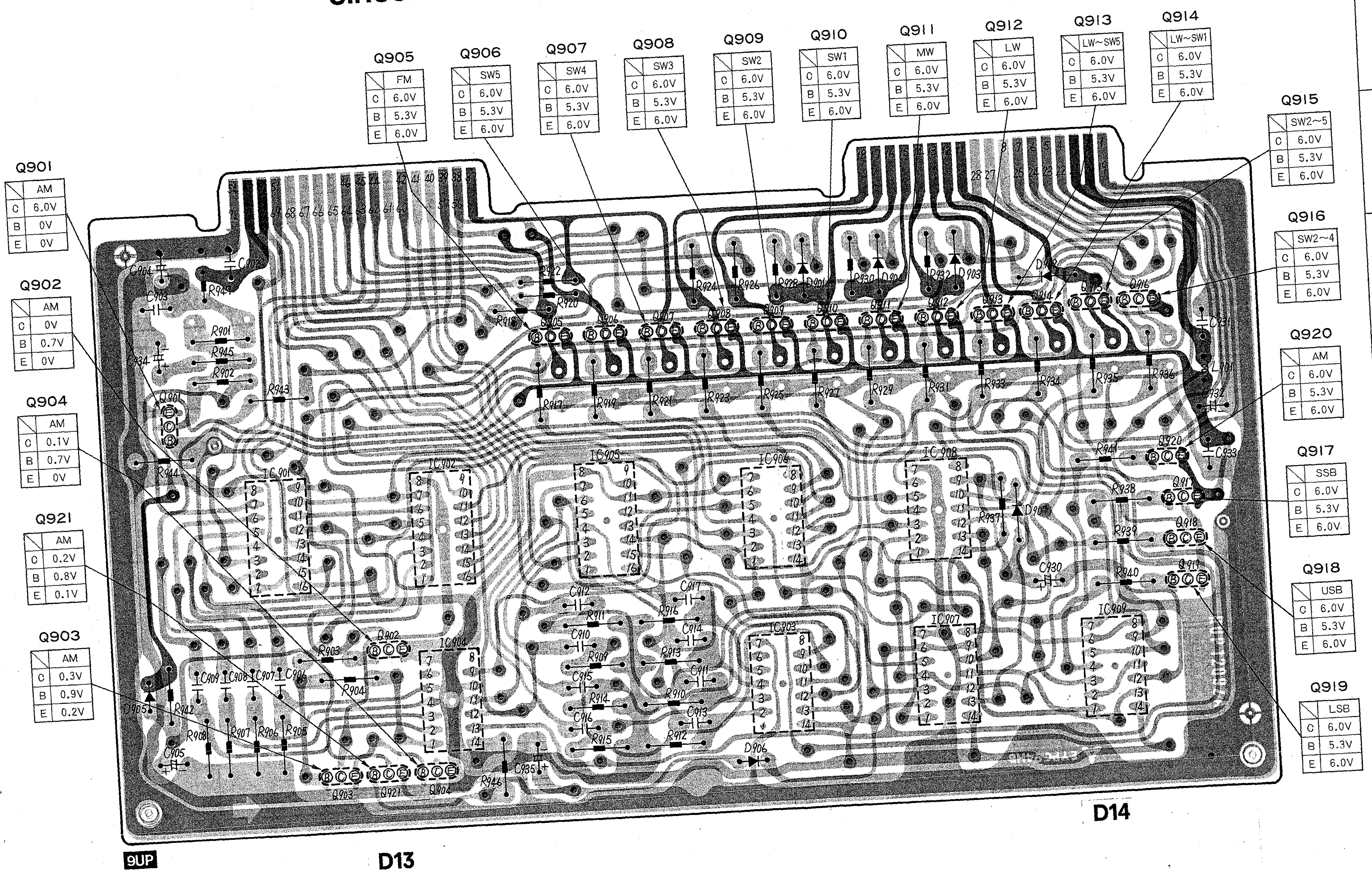
1. La marque (▼) signale un point de vérification. Ex.: ▼ =point de vérification 1.
2. La tension c.c. est mesurée au moyen d'un voltmétre électronique à partir de la borne négative de la pile.
   ☐ . . . Position PO, ( ) . . Position SSB.

SCHEMATIC DIAGRAM (10 UP,13 UPc, d,17 UP).. RADIO CONTROL-1, μCOM BLOCK, TUNING & CLOCK CIRCUIT

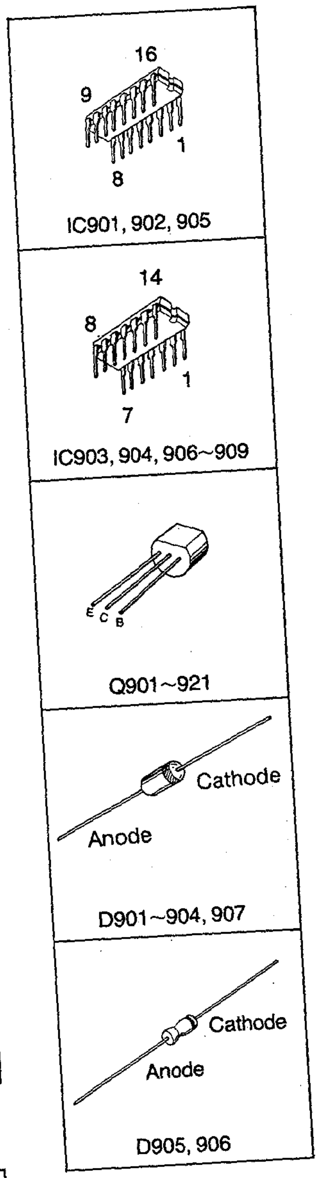

13UPd
13UPc
17UP
10UP
Q1304, 1305 PN120S PHOTO TR
D1310, 1311 LN62S LED
D1014, 1015 MA150TA PROTECTOR
Q1002~1005 2SC828 BUFFER
D1007~1010 MA150TA PROTECTOR
IC1011 RVITC4001BP QUAD NOR GATE
IC1010 RVITC4069UBP HEX INVERTER
IC1004 RVITC4508BP LATCH
IC1009 RVITC4042BP QUAD LATCH
D1016 OA90FV SWITCHING
Q1006~1010 2SA564 SWITCHING
D1029 MA150TA PROTECTOR
Q1011~1016, 1018 2SC828 BUFFER
Q1017 2SA564 BUFFER
IC1001 RVITC4069UBP HEX INVERTER
IC1002 RVITC4030BP QUAD EXCLUSIVE OR GATE
IC1003 RVITC4013BP D FLIP FLOP
IC1005 RVITC4518BP BCD UP COUNTER
IC1006 RVIMSM4019RS AND-OR GATE
D1005, 1006 MA150 PROTECTOR
IC1007 RVITC4028BP BCD DECORDER
D1019~1023 MA150TA PROTECTOR
D1012 MA150TA PROTECTOR
D1011, 1013, 1028 OA95 SWITCHING
D1017, 1018 OA90FV PROTECTOR
D1001~1004 MA150TA PROTECTOR
FAST SLOW S1302
GND RF1 FAST TUN. TUN. +6.2V CONST. +6.2V CONST.
TO 13UP CP41 To Page 44
CLOCK TIMER
BAND DECORDER
+6V LINE
IC1008
CS102
CN19
To 14UP CP19 To Page 49
To 15UP To Page 52
To 14UP CP15 To Page 45
X1001
L1002
MHz kHz CH

9 UP **9 UP**

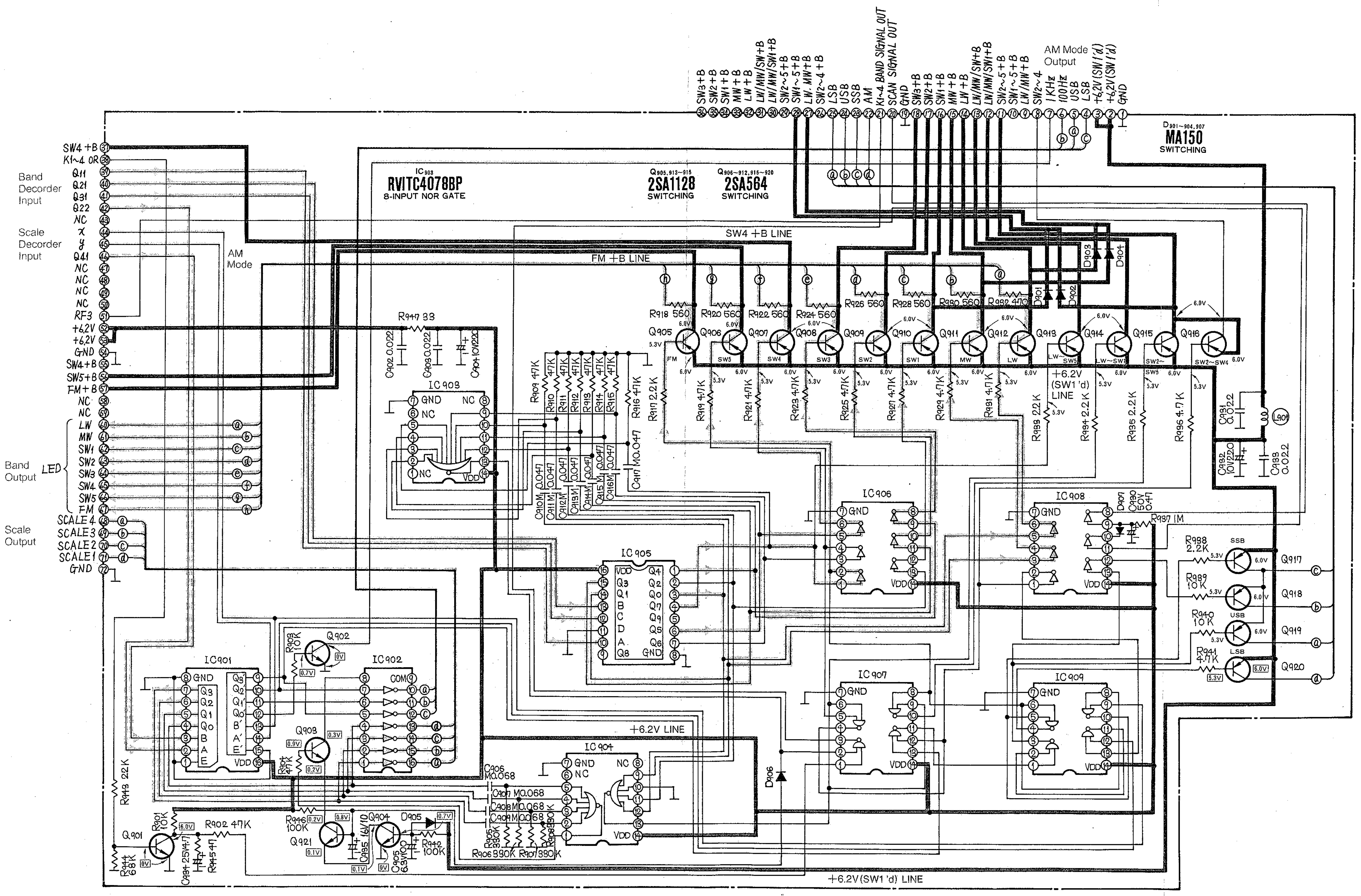
CIRCUIT BOARD WIRING VIEW (9 UP) . . . RADIO CONTROL-2 CIRCUIT


IC901
IC902
IC903
IC904
IC905
IC906
IC907
IC908
IC909
D13
D14
9UP

		C	B	E
Q901	AM	6.0V	0V	0V
Q902	AM	0V	0.7V	0V
Q904	AM	0.1V	0.7V	0V
Q921	AM	0.2V	0.8V	0.1V
Q903	AM	0.3V	0.9V	0.2V
Q905	FM	6.0V	5.3V	6.0V
Q906	SW5	6.0V	5.3V	6.0V
Q907	SW4	6.0V	5.3V	6.0V
Q908	SW3	6.0V	5.3V	6.0V
Q909	SW2	6.0V	5.3V	6.0V
Q910	SW1	6.0V	5.3V	6.0V
Q911	MW	6.0V	5.3V	6.0V
Q912	LW	6.0V	5.3V	6.0V
Q913	LW~SW5	6.0V	5.3V	6.0V
Q914	LW~SW1	6.0V	5.3V	6.0V
Q915	SW2~5	6.0V	5.3V	6.0V
Q916	SW2~4	6.0V	5.3V	6.0V
Q920	AM	6.0V	5.3V	6.0V
Q917	SSB	6.0V	5.3V	6.0V
Q918	USB	6.0V	5.3V	6.0V
Q919	LSB	6.0V	5.3V	6.0V


16
9
8
1
IC901, 902, 905
14
8
7
1
IC903, 904, 906~909
E C B
Q901~921
Cathode
Anode
D901~904, 907
Cathode
Anode
D905, 906

SCHEMATIC DIAGRAM (9 UP) . . . RADIO CONTROL-2 CIRCUIT


SW3+B ㊱
SW2+B ㉟
SW1+B ㉞
MW+B ㉝
LW+B ㉜
LW/MW/SW+B ㉛
LW/MW/SW1+B ㉚
SW2~5+B ㉙
SW1~5+B ㉘
LW, MW+B ㉗
SW2~4+B ㉖
LSB ㉕
USB ㉔
SSB ㉓
AM ㉒
K1~4 BAND SIGNAL OUT ㉑
SCAN SIGNAL OUT ⑳
GND ⑲
SW3+B ⑱
SW2+B ⑰
SW1+B ⑯
MW+B ⑮
LW+B ⑭
LW/MW/SW+B ⑬
LW/MW/SW1+B ⑫
SW2~5+B ⑪
SW1~5+B ⑩
LW/MW+B ⑨
SW2~4 ⑧
AM Mode Output
1KHz ⑦
100Hz ⑥
USB ⑤
LSB ④
+6.2V (SW1'd) ③
+6.2V (SW1'd) ②
GND ①
SW4+B (37)
K1~4 OR (38)
Band Decorder Input
Q11 (39)
Q21 (40)
Q31 (41)
Q22 (42)
NC (43)
Scale Decorder Input
x (44)
y (45)
Q41 (46)
NC (47)
NC (48)
NC (49)
NC (50)
RF3 (51)
+6.2V (52)
+6.2V (53)
GND (54)
SW4+B (55)
SW5+B (56)
FM+B (57)
NC (58)
NC (59)
Band Output
LED
LW (60)
MW (61)
SW1 (62)
SW2 (63)
SW3 (64)
SW4 (65)
SW5 (66)
FM (67)
Scale Output
SCALE 4 (68)
SCALE 3 (69)
SCALE 2 (70)
SCALE 1 (71)
GND (72)
AM Mode
IC903
RVITC4078BP
8-INPUT NOR GATE
Q905, 913~915
2SA1128
SWITCHING
Q906~912, 916~920
2SA564
SWITCHING
D901~904, 907
MA150
SWITCHING
SW4 +B LINE
FM +B LINE
+6.2V LINE
+6.2V (SW1'd) LINE
+6.2V (SW1'd) LINE
R947 33
C902 0.022
C903 0.022
C904 10/220
IC903
R909 4.7K
R910 4.7K
R911 4.7K
R912 4.7K
R913 4.7K
R914 4.7K
R915 4.7K
R916 4.7K
R917 2.2K
C917 M0.047
C910 M0.047
C911 M0.047
C912 M0.047
C913 M0.047
C914 M0.047
C915 M0.047
C916 M0.047
R918 560
R920 560
R922 560
R924 560
R926 560
R928 560
R930 560
R932 470
Q905
Q906
Q907
Q908
Q909
Q910
Q911
Q912
Q913
Q914
Q915
Q916
FM
SW5
SW4
SW3
SW2
SW1
MW
LW
LW~SW5
LW~SW1
SW2~
SW2~SW4
6.0V
5.3V
R919 4.7K
R921 4.7K
R923 4.7K
R925 4.7K
R927 4.7K
R929 4.7K
R931 4.7K
R933 22K
R934 2.2K
R935 2.2K
R936 4.7K
+6.2V (SW1'd) LINE
C931 0.022
C932 10/220
C933 0.022
L901
D901
D902
D903
D904
IC906
IC908
D907
C930 50V 0.47
R937 1M
R938 2.2K
R939 10K
R940 10K
R941 4.7K
SSB
USB
LSB
Q917
Q918
Q919
Q920
IC905
VDD Q3 Q1 B C D A Q8
Q4 Q2 Q0 Q7 Q9 Q5 Q6 GND
IC907
IC909
IC901
Q3 Q2 Q1 Q0 B A E
Q3' Q2' Q1' Q0' B' A' E'
IC902
COM
Q902
R903 10K
Q903
R904 47K
IC904
GND NC NC VDD
D906
R943 22K
Q901
R901 10K
R902 47K
R944 68K
C934 25V4.7
R945 47
R946 100K
Q921
Q904
D905
C935 16/10
C905 6.3V100
R942 100K
C906 M0.068
C907 M0.068
C908 M0.068
C909 M0.068
R905 330K
R906 330K
R907 330K
R908 330K
0V
0.7V
0.9V
0.3V
0.2V
0.8V
0.1V
6.0V

9UP

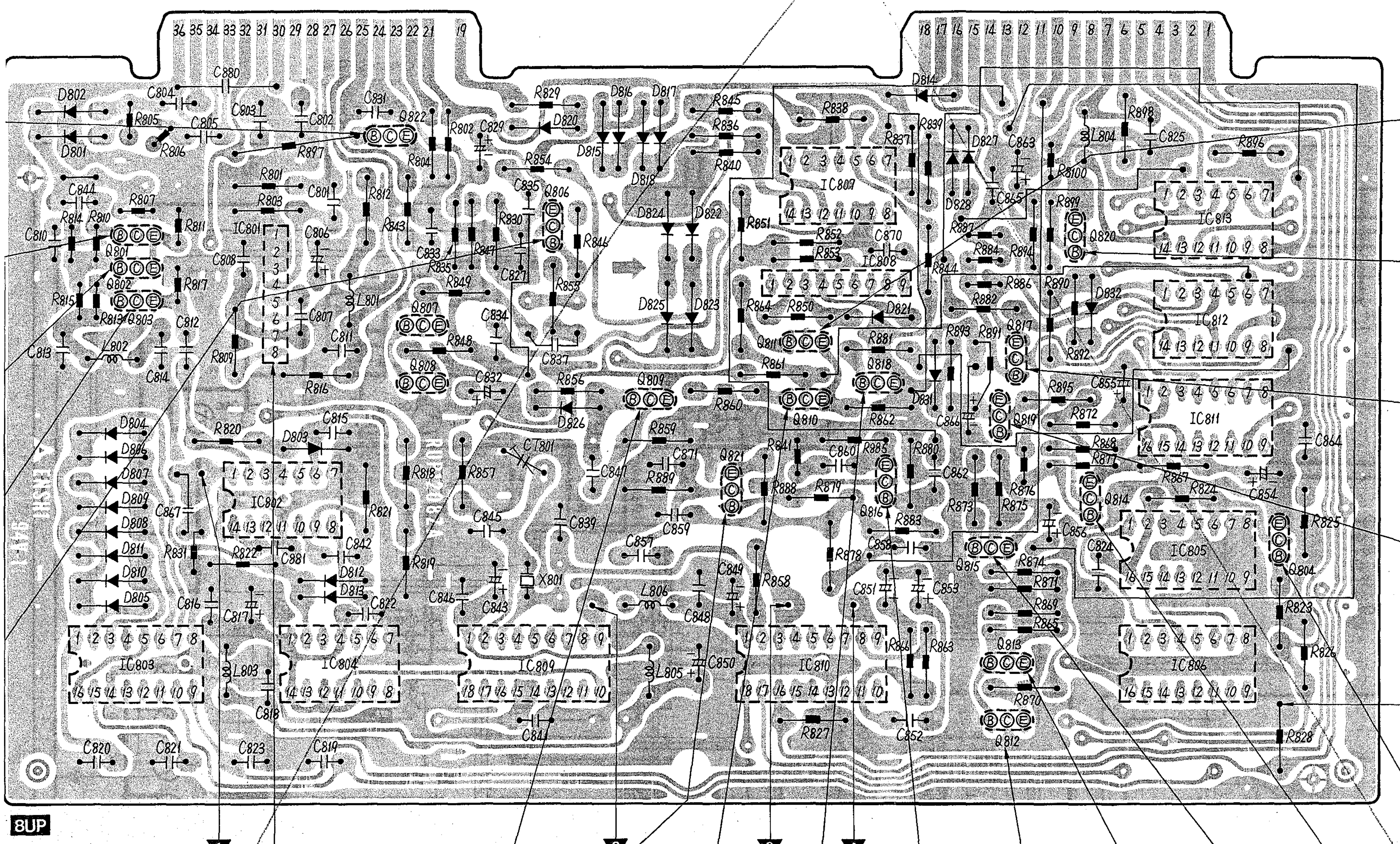
Q901~903, 921	2SC828	SWITCHING
IC901	RVITC455BP	DUAL BINARY DECORDER
IC902	RVIM54528P	SWITCHING
Q904	2SC1327U	SWITCHING
D905	0A90FV	DISCHARGER
IC904	RVITC4002BP	DUAL 4-INPUT NOR GATE
IC905	RVITC4028BP	BCD DECORDER
D906	0A90FV	DISCHARGER
IC907, 909	RVITC4011BP	QUAD 2-INPUT NAND GATE
IC906, 908	RVITC4069UBP	HEX INVERTER

Note:
DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
☐ . . AM position,

Bemerkungen:
Alle Gleichspannungen sind mit einem Elektronikvoltmeter vom negativen Batterieanschluß aus zu messen.
☐ . . Stellung „AM",

Remarque:
La tension c.c. est mesurée au moyen d'un voltmétre électronique à partir e la borne négative de la pile.
☐ . . Position AM,

CIRCUIT BOARD WIRING VIEW (8 UP) . . . 1st, 2nd PLL & CONTROL CIRCUIT


36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 19
18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
D802
D801
C804
C880
C803
C802
C805
R805
R806
R897
C831
Q822
R829
D820
C829
R802
R804
D816
D817
D815
D818
R845
R836
R840
R854
C835
Q806
D814
R838
R837
R839
D827
C863
L804
R898
C825
R896
R8100
IC807
D828
C865
IC813
Q820
R899
R801
R803
C801
R812
R807
R811
C844
R814
R810
C810
Q801
Q802
R817
R815
R813
Q803
C812
IC801
C808
C806
C807
L801
C811
R809
C813
L802
C814
R816
R843
C833
R835
R847
R830
C821
R844
R855
R849
Q807
Q808
R848
C834
C832
C837
R856
D826
Q809
D824
D822
D825
D823
R851
R852
R853
C870
IC808
R864
R850
D821
Q811
R861
R881
Q818
R887
R884
R894
R886
R890
D832
R882
R893
R891
Q817
IC812
R892
Q810
R862
D831
C866
Q819
R895
C855
R872
IC811
C864
R860
R859
D804
D806
D807
D809
D808
D811
D810
D805
R820
C815
D803
IC802
C867
R818
R857
CT801
C841
C871
R889
Q821
R841
R888
C860
R879
R885
Q816
R880
C862
R873
R876
R875
R868
R871
R867
R824
C854
Q814
C856
IC805
R825
Q804
R821
C842
R831
R822
C881
D812
D813
C816
C817
C822
C845
C839
C857
C859
R819
C846
C843
X801
C849
R858
L806
C848
R878
C858
R883
C851
C853
Q815
R874
R877
R869
R865
C824
R823
R826
IC803
IC804
IC809
IC810
IC806
L803
C818
L805
C850
R866
R863
Q813
R870
Q812
R827
C852
C847
R828
C820
C821
C823
C819
8UP
1
2
3
4
5

	AM
	Q811
C	5.1V
B	4.2V
E	3.5V

	AM
	Q820
C	5.2V
B	0V
E	0V

Q817

	MW	SSB
C	5.2V	0V
B	0V	0.7V
E	0V	0V

Q819

	AM
C	5.2V
B	0V
E	0V

804

	MW
C	5.0V
B	0V
E	0V

IC801

	1	2	3	4	5	6	7	8
AM	0V	0V	0V	2.8V	2.8V	0V	5.7V	0.6V

Q809

	AM
C	0V
B	5.0V
E	5.1V

Q821

	AM
C	1.5V
B	4.8V
E	5.2V

Q810

	AM
C	5.0V
B	0V
E	3.5V

Q818

	AM
C	0V
B	0V
E	0V

Q816

	AM
C	4.8V
B	1.9V
E	1.2V

Q812

	AM
C	0V
B	3.3V
E	2.6V

Q813

	AM
C	5.12V
B	3.3V
E	2.6V

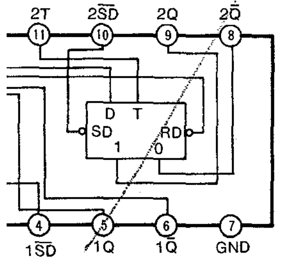
Q815

	AM
C	0V
B	0V
E	0V

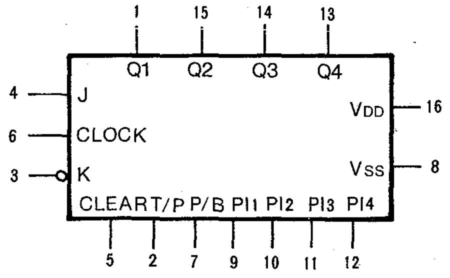
Q814

	MW
C	5.1V
B	5.2V
E	5.2V

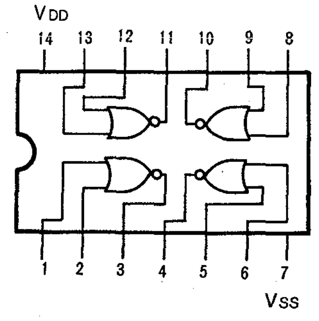
VIM74LS74P


2T
2SD
2Q
2Q
11
10
9
8
D
T
SD
RD
1
0
4
5
6
7
1SD
1Q
1Q
GND

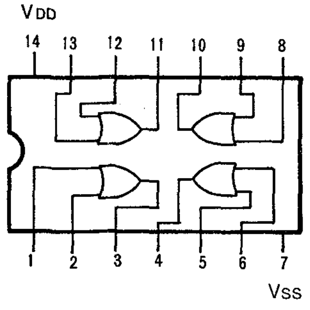
IC805 RVITC4035BP

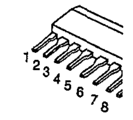

1
15
14
13
Q1
Q2
Q3
Q4
4
J
6
CLOCK
3
K
VDD
16
VSS
8
CLEART/P
P/B
PI1
PI2
PI3
PI4
5
2
7
9
10
11
12

IC812 RVITC4001BP

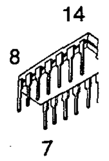

VDD
14
13
12
11
10
9
8
1
2
3
4
5
6
7
Vss

IC813 RVITC4071BP

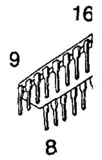

VDD
14
13
12
11
10
9
8
1
2
3
4
5
6
7
Vss



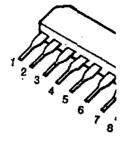
IC801



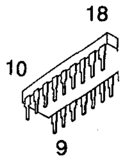
IC802, 804, 807



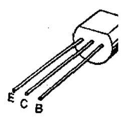
IC803, 805, 8



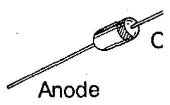
IC808



IC809, 81

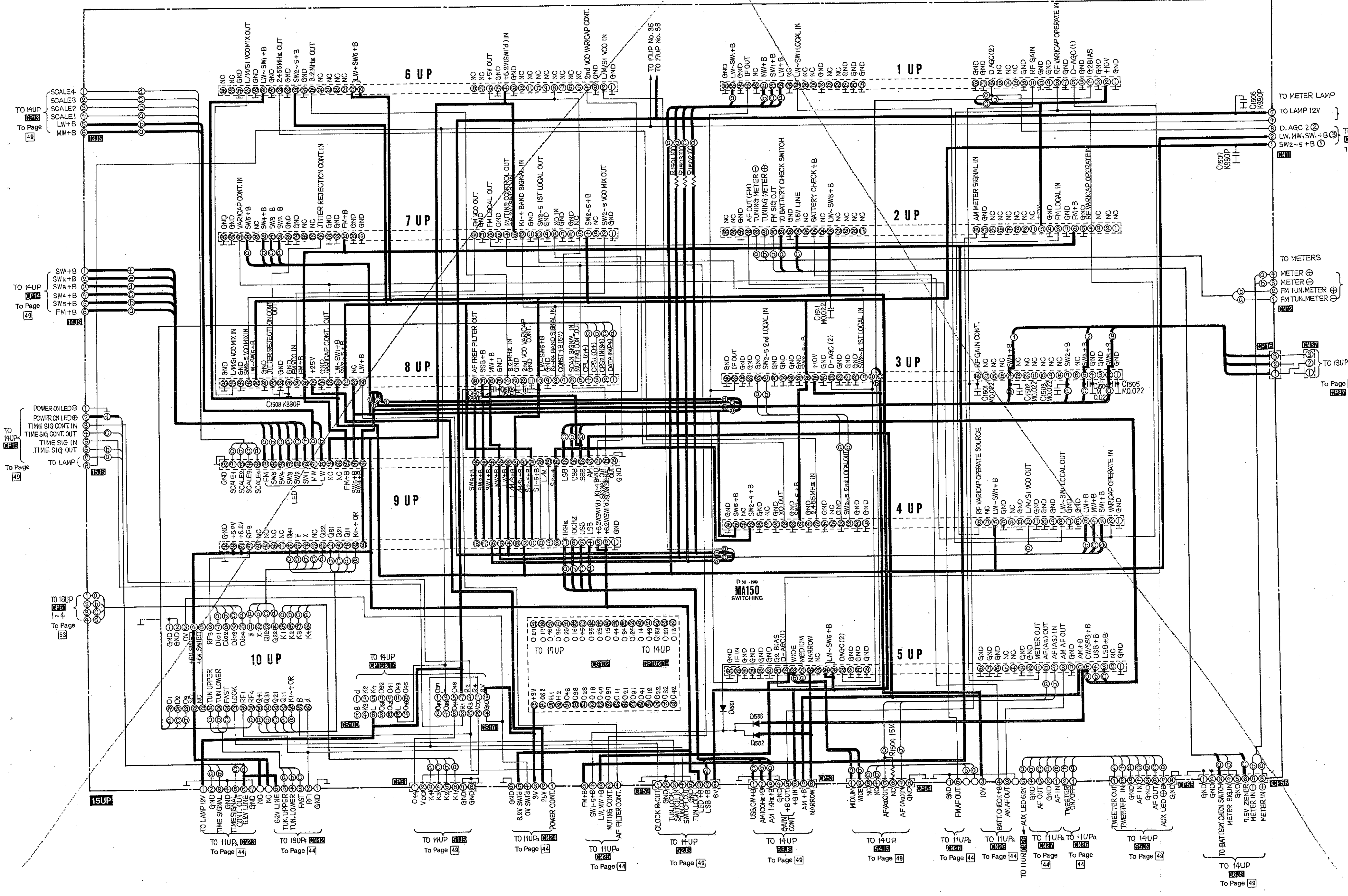


Q801~804, 806

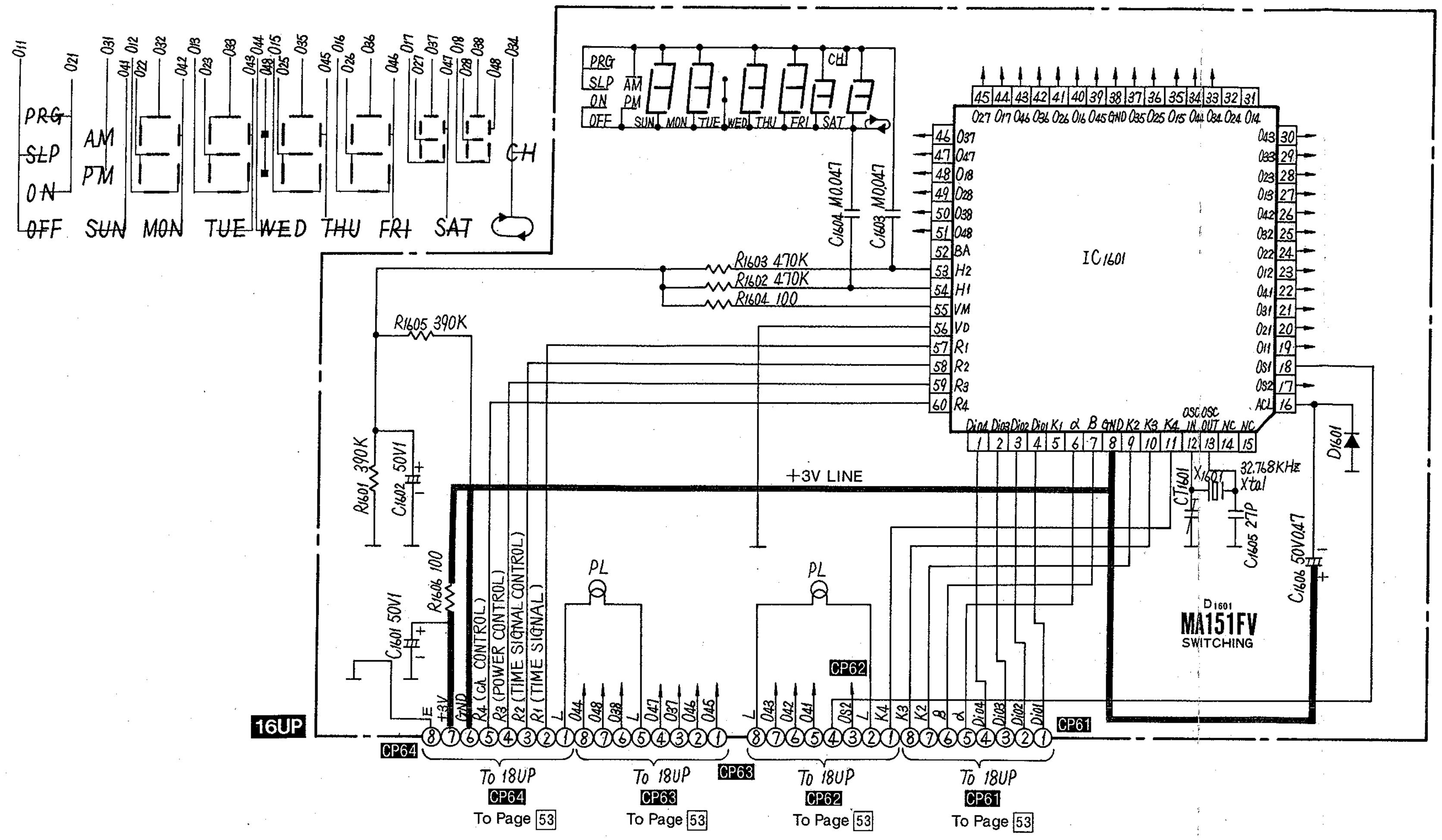


D801~818, 82
828, 831, 832

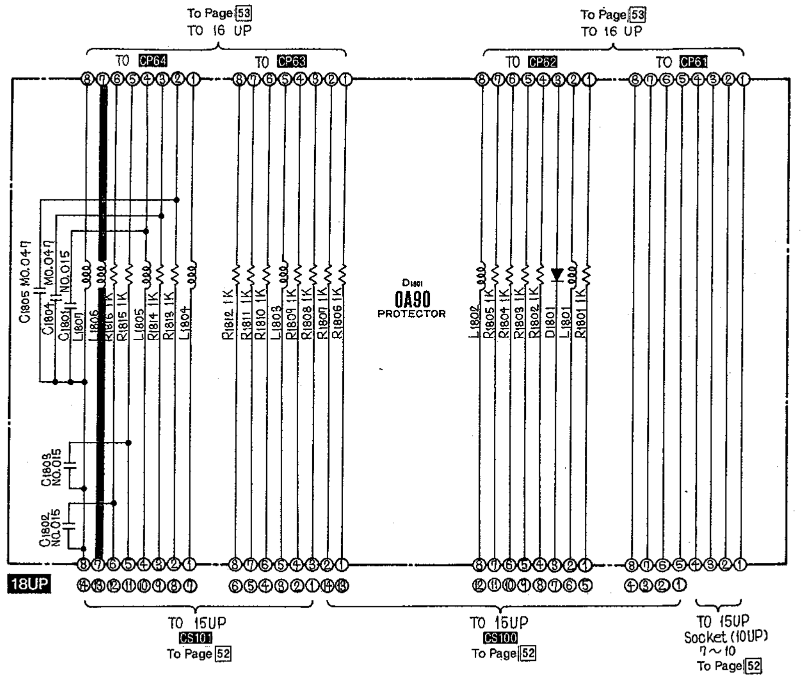
SCHEMATIC DIAGRAM (15 UP)... COMMON CIRCUIT


1 UP
2 UP
3 UP
4 UP
5 UP
6 UP
7 UP
8 UP
9 UP
10 UP
D1501~1503
MA150
SWITCHING
CS102
TO 17UP
TO 14UP
CP18&19
TO 14UP
CP16&17
CS100
CS101
TO 14UP
CP13
To Page 49
SCALE4
SCALE3
SCALE2
SCALE1
LW+B
MW+B
13JS
TO 14UP
CP14
To Page 49
SW1+B
SW2+B
SW3+B
SW4+B
SW5+B
FM+B
14JS
TO 14UP
CP15
To Page 49
POWER ON LED⊖
POWER ON LED⊕
TIME SIG CONT. IN
TIME SIG CONT. OUT
TIME SIG IN
TIME SIG OUT
TO LAMP
15JS
TO 18UP
CP61
1~4
To Page 53
TO METER LAMP
TO LAMP 12V
C1506
K330P
D. AGC 2
LW, MW, SW, +B
SW2~5+B
TO 13UPa
CP31
To Page 26
CN11
C1507
K330P
TO METERS
METER ⊕
METER ⊖
FM TUN. METER ⊕
FM TUN. METER ⊖
CN12
CP16
CN37
TO 13UPg
To Page 26
CP37
C1508 K330P
C1511
M0.022
C1501
M0.022
C1502
M0.022
C1503
M0.022
C1504
M0.022
C1505
M0.022
R1501 100
R1502 100
R1503 100
R1504 15K
D1501
D1502
D1503
TO 17UP No. 35
TO 17UP No. 36
15UP
TO 11UPa
CN23
To Page 44
TO 13UPc
CN42
To Page 44
TO 14UP
51JS
To Page 49
TO 11UPa
CN24
To Page 44
TO 11UPa
CN25
To Page 44
TO 14UP
52JS
To Page 49
TO 14UP
53JS
To Page 49
TO 14UP
54JS
To Page 49
TO 11UPa
CN26
To Page 44
TO 11UPa
CN26
To Page 44
TO 11UPa
CN28
TO 11UPa
CN27
To Page 44
TO 11UPa
CN26
To Page 44
TO 14UP
55JS
To Page 49
TO BATTERY CHECK SWITCH
TO 14UP
56JS
To Page 49
CP51
CP52
CP53
CP54
CP55
CP56

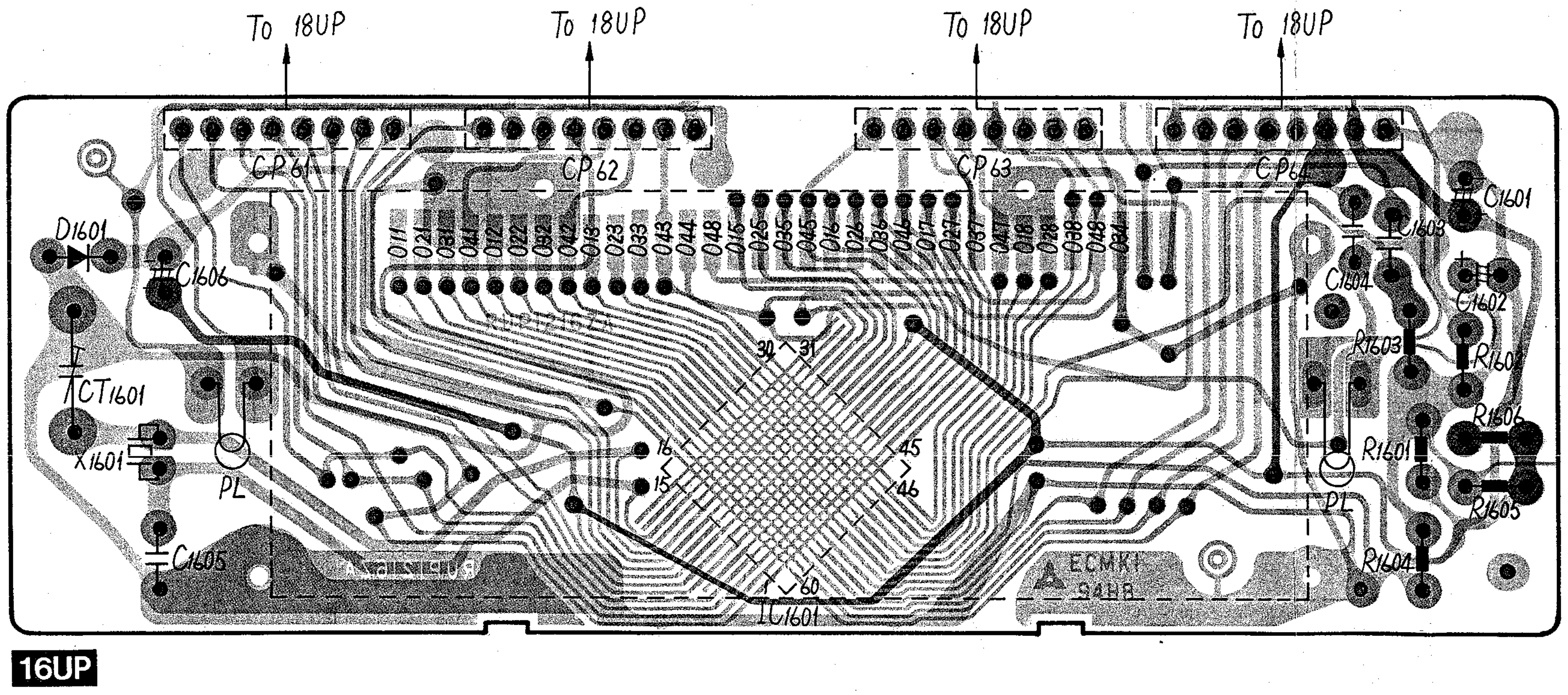
SCHEMATIC DIAGRAM (16 UP) . . . CLOCK CIRCUIT


PRG
SLP
ON
OFF
AM
PM
SUN MON TUE WED THU FRI SAT
CH
IC1601
R1603 470K
R1602 470K
R1604 100
R1605 390K
R1601 390K
C1602 50V1
C1601 50V1
R1606 100
C1604 M0.047
C1603 M0.047
CT1601
X1601
32.768KHz Xtal
C1605 27P
C1606 50V0.47
D1601
+3V LINE
PL
D1601 MA151FV SWITCHING
K4 (CA. CONTROL)
R3 (POWER CONTROL)
R2 (TIME SIGNAL CONTROL)
R1 (TIME SIGNAL)
16UP
CP64
CP63
CP62
CP61
To 18UP
To Page 53

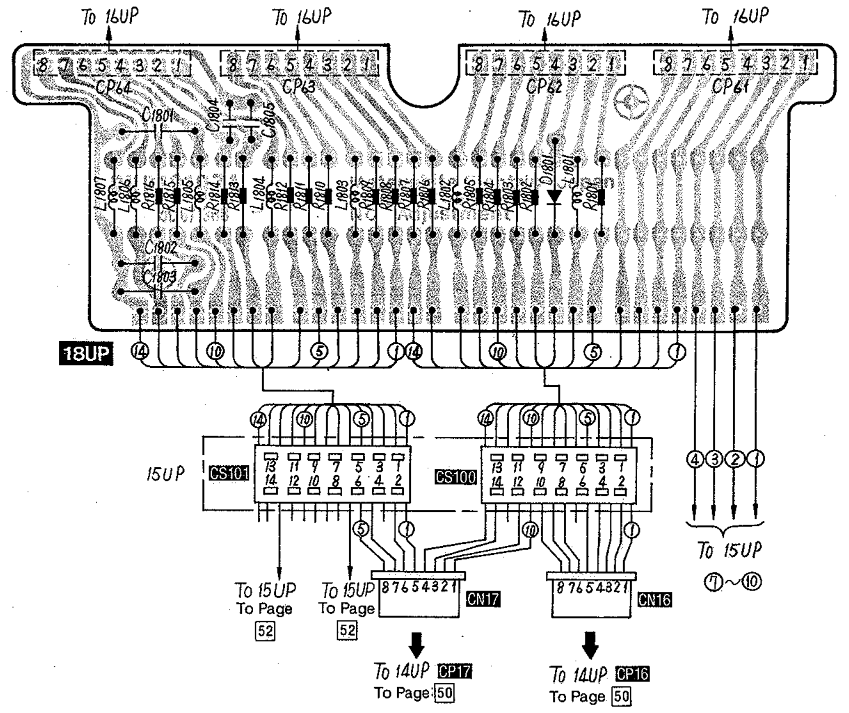
SCHEMATIC DIAGRAM (18 UP) . . . COMMON CIRCUIT

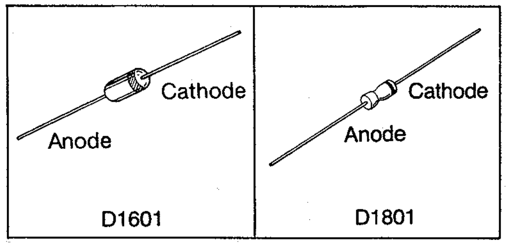

To Page 53
TO 16 UP
TO CP64
TO CP63
TO CP62
TO CP61
D1801 OA90 PROTECTOR
18UP
TO 15UP
CS101
CS100
To Page 52
TO 15UP
Socket (10UP)
⑦~⑩
To Page 52

CIRCUIT BOARD WIRING VIEW (16 UP) . . . CLOCK CIRCUIT

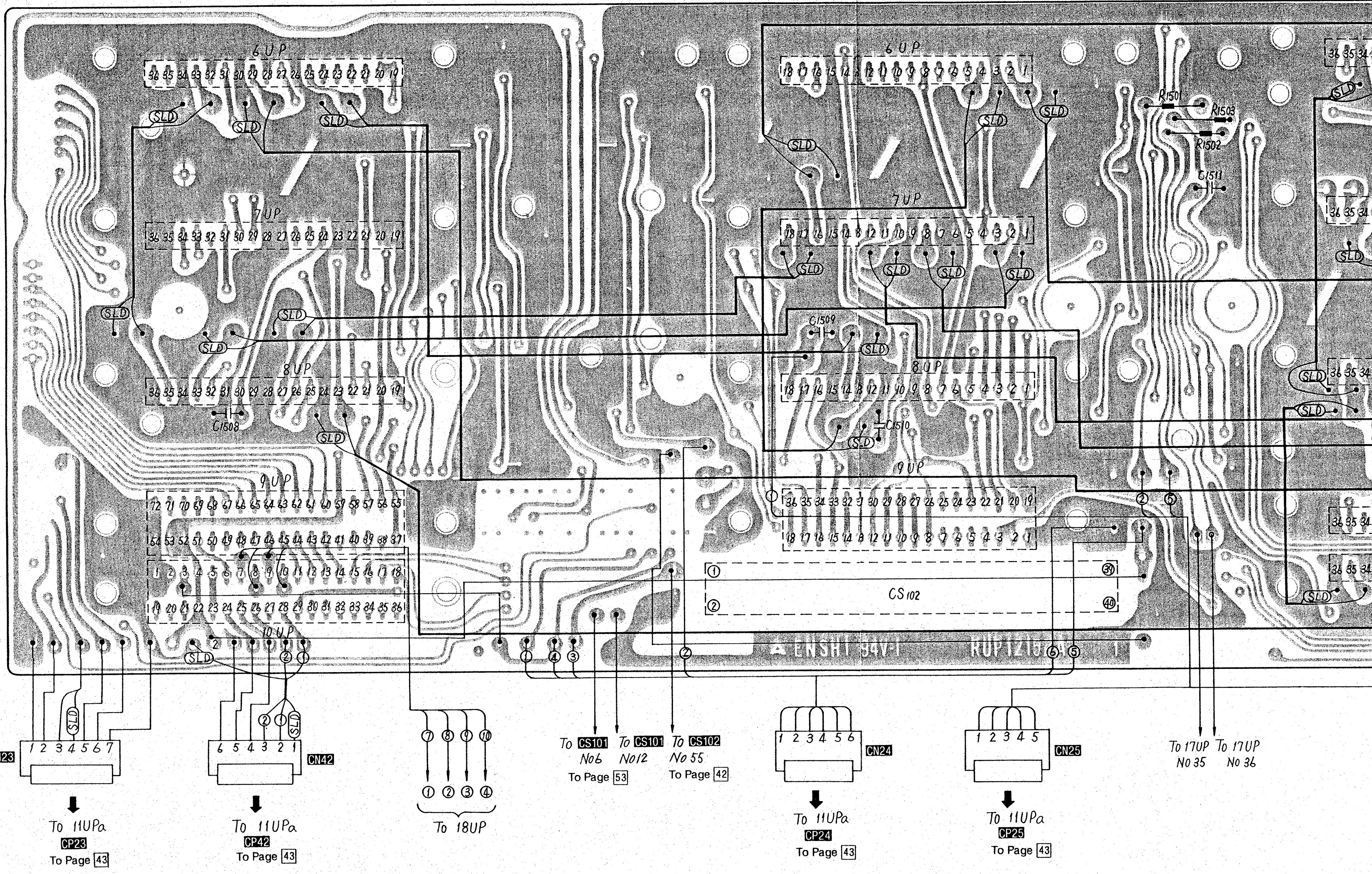

To 18UP
To 18UP
To 18UP
To 18UP
CP61
CP62
CP63
CP64
D1601
C1606
CT1601
X1601
PL
C1605
IC1601
C1601
C1603
C1604
C1602
R1603
R1602
R1601
R1606
R1605
R1604
PL
ECMK1
16UP

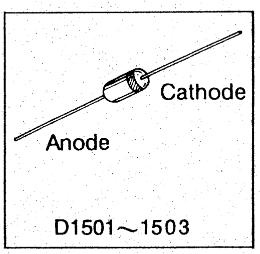
CIRCUIT BOARD WIRING VIEW (18 UP) . . . COMMON CIRCUIT


To 16UP
To 16UP
To 16UP
To 16UP
CP64
CP63
CP62
CP61
C1801
C1802
C1803
C1804
D1801
18UP
15UP
CS101
CS100
To 15UP
To Page 52
To 15UP
To Page 52
CN17
CN16
To 14UP CP17
To Page 50
To 14UP CP16
To Page 50
To 15UP
⑦~⑩


Cathode
Anode
D1601
Cathode
Anode
D1801

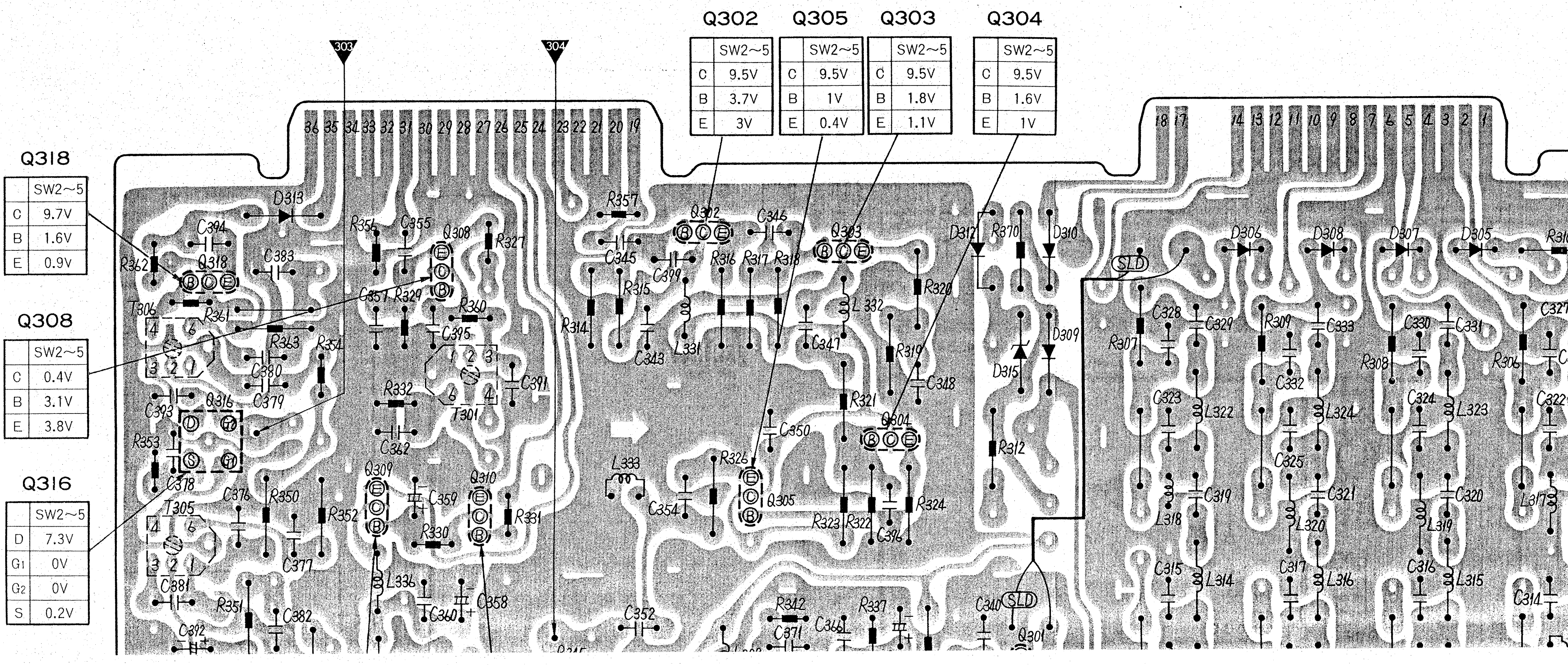
CIRCUIT BOARD WIRING VIEW


6UP
7UP
8UP
9UP
10UP
SLD
C1508
C1509
C1510
C1511
R1501
R1502
R1503
CS102
CN23
CN42
CN24
CN25
To 11UPa
CP23
To Page 43
To 11UPa
CP42
To Page 43
To 18UP
To CS101 No6
To CS101 No12
To Page 53
To CS102 No55
To Page 42
To 11UPa
CP24
To Page 43
To 11UPa
CP25
To Page 43
To 17UP No35
To 17UP No36


Cathode
Anode
D1501~1503

3 UP, 13 UPa, b **3 UP, 13 UPa, b**

CIRCUIT BOARD WIRING VIEW (3 UP, 13 UPa


303
304
D313
C394
R362
Q318
C383
R356
C355
Q308
R327
R357
Q302
C346
C345
C399
R316
R317
R318
Q303
D312
R370
D310
SLD
D306
D308
D307
D305
T306
R361
C357
R329
R360
C395
R363
R354
C380
C379
C391
T301
R332
C393
Q316
R353
C342
C318
T305
C376
R350
R352
Q309
C359
Q310
R330
R331
C377
C381
R351
C382
L336
C360
C358
L333
C354
C352
R342
C371
R337
C340
Q301
Q305
R326
R323
R322
R324
Q304
C350
R321
C348
R319
R320
L332
C347
C343
L331
R314
R315
D315
D309
R312
C328
C329
R307
R309
C333
C330
C331
R308
R306
C332
C323
L322
L324
C324
L323
C325
C319
C321
C320
L318
L320
L319
C315
L314
C317
L316
C316
L315
C314

Q302

	SW2~5
C	9.5V
B	3.7V
E	3V

Q305

	SW2~5
C	9.5V
B	1V
E	0.4V

Q303

	SW2~5
C	9.5V
B	1.8V
E	1.1V

Q304

	SW2~5
C	9.5V
B	1.6V
E	1V

Q318

	SW2~5
C	9.7V
B	1.6V
E	0.9V

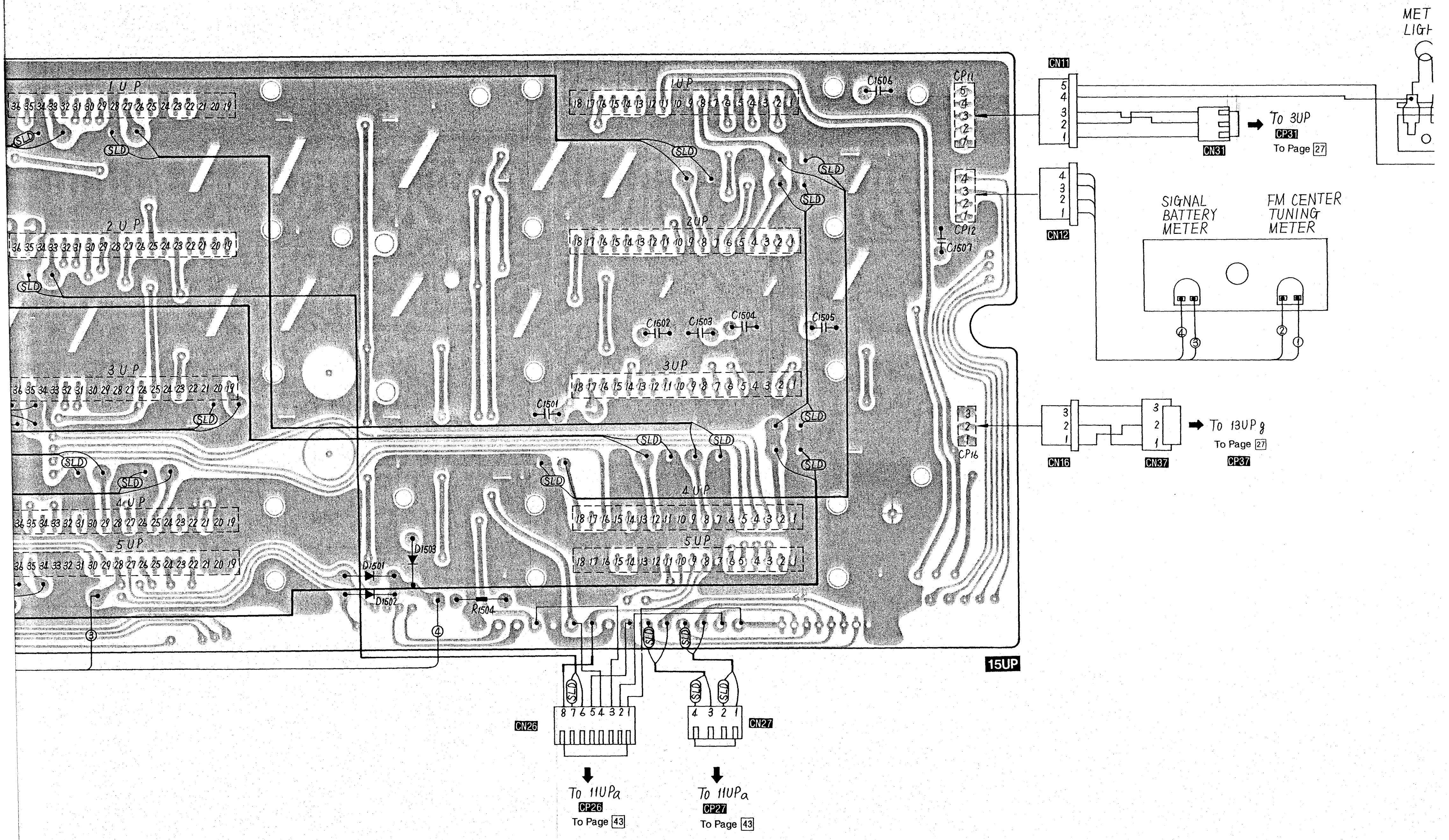
Q308

	SW2~5
C	0.4V
B	3.1V
E	3.8V

Q316

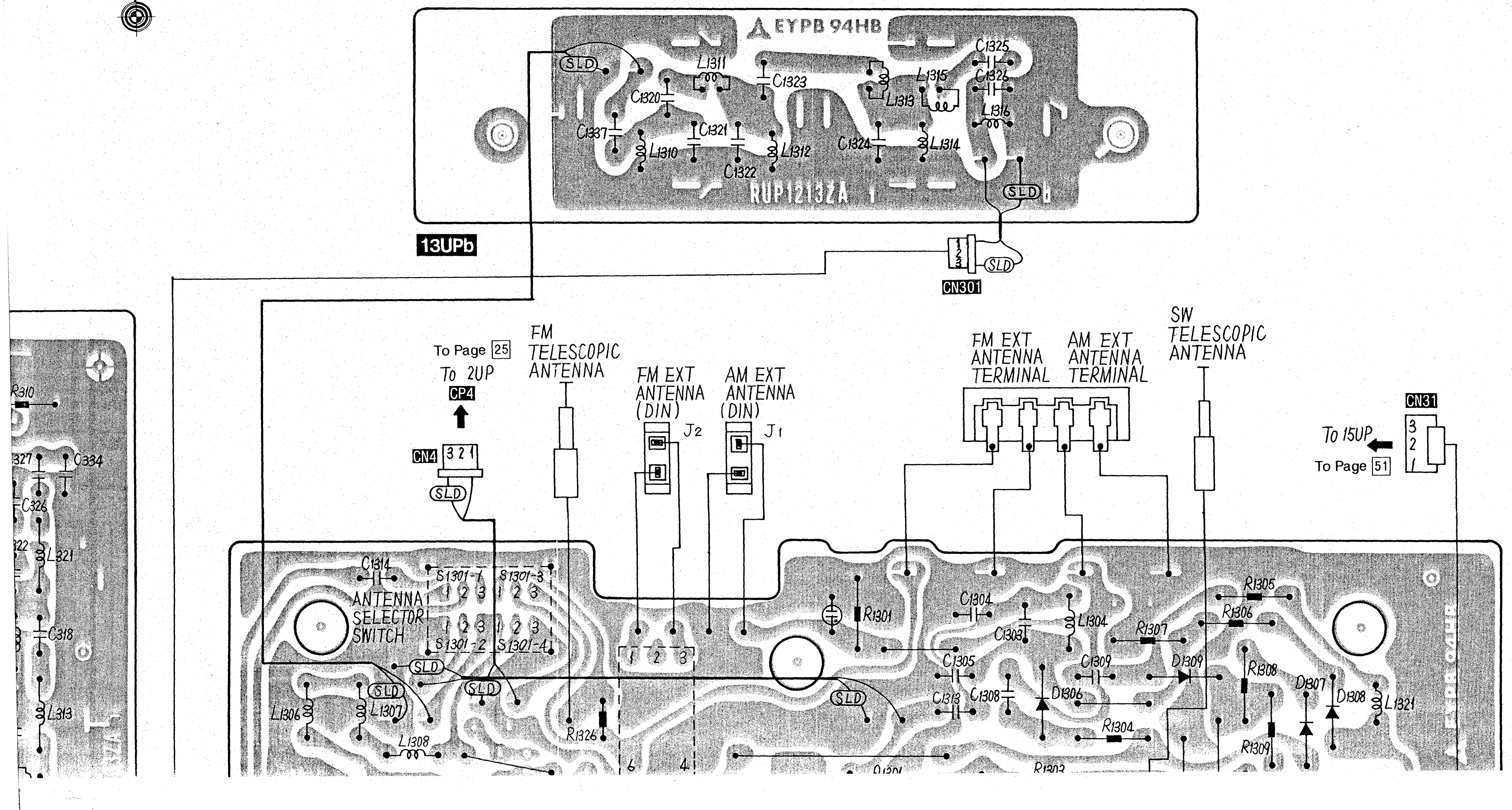
	SW2~5
D	7.3V
G1	0V
G2	0V
S	0.2V

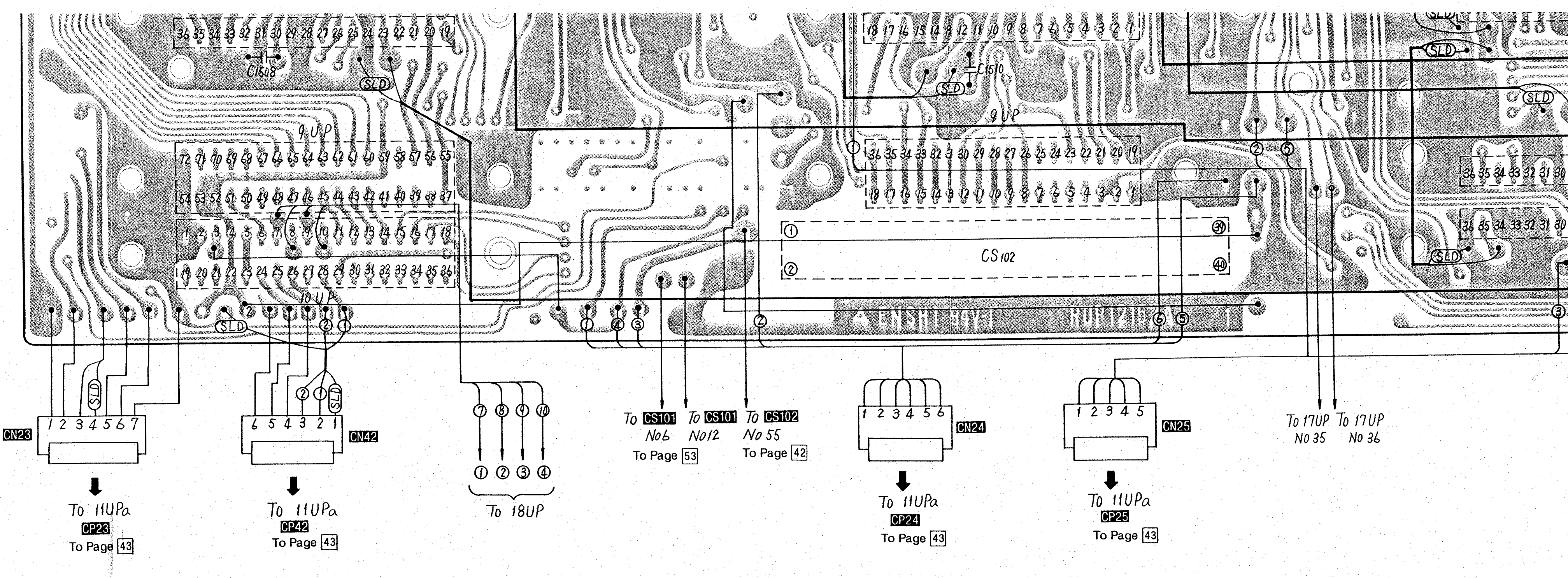
EW (15 UP) . . . COMMON CIRCUIT

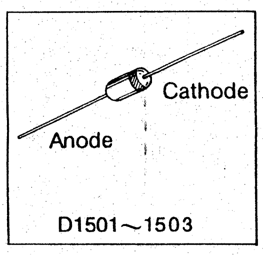

MET
LIGH
1UP
2UP
3UP
4UP
5UP
SLD
C1506
CP11
CN11
CN31
To 3UP
CP31
To Page 27
CN12
CP12
C1507
SIGNAL BATTERY METER
FM CENTER TUNING METER
C1502
C1503
C1504
C1505
C1501
CP16
CN16
CN37
To 13UPg
To Page 27
CP37
D1501
D1502
D1503
R1504
15UP
CN26
CN27
To 11UPa
CP26
To Page 43
To 11UPa
CP27
To Page 43

3 UP, 13 UPa, b **3 UP, 13 UPa, b**

'a, b) . . .SW2~5 BPF, RF—IF & ANTENNA CIRCUIT


EYPB 94HB
SLD
L1311
C1323
C1325
C1326
L1315
L1313
L1316
C1320
C1337
C1321
L1310
L1312
C1324
L1314
C1322
RUP1213ZA
13UPb
CN301
To Page 25
To 2UP
CP4
CN4
FM TELESCOPIC ANTENNA
FM EXT ANTENNA (DIN)
AM EXT ANTENNA (DIN)
J2
J1
FM EXT ANTENNA TERMINAL
AM EXT ANTENNA TERMINAL
SW TELESCOPIC ANTENNA
CN31
To 15UP
To Page 51
R310
C327
C334
C326
L321
C318
L313
C1314
S1301-1
S1301-3
ANTENNA SELECTOR SWITCH
S1301-2
S1301-4
R1301
C1304
C1303
L1304
R1307
R1305
R1306
C1305
C1309
D1309
R1308
D1307
D1308
L1321
C1313
C1308
D1306
L1306
L1307
L1308
R1326
R1304
R1309
R1303

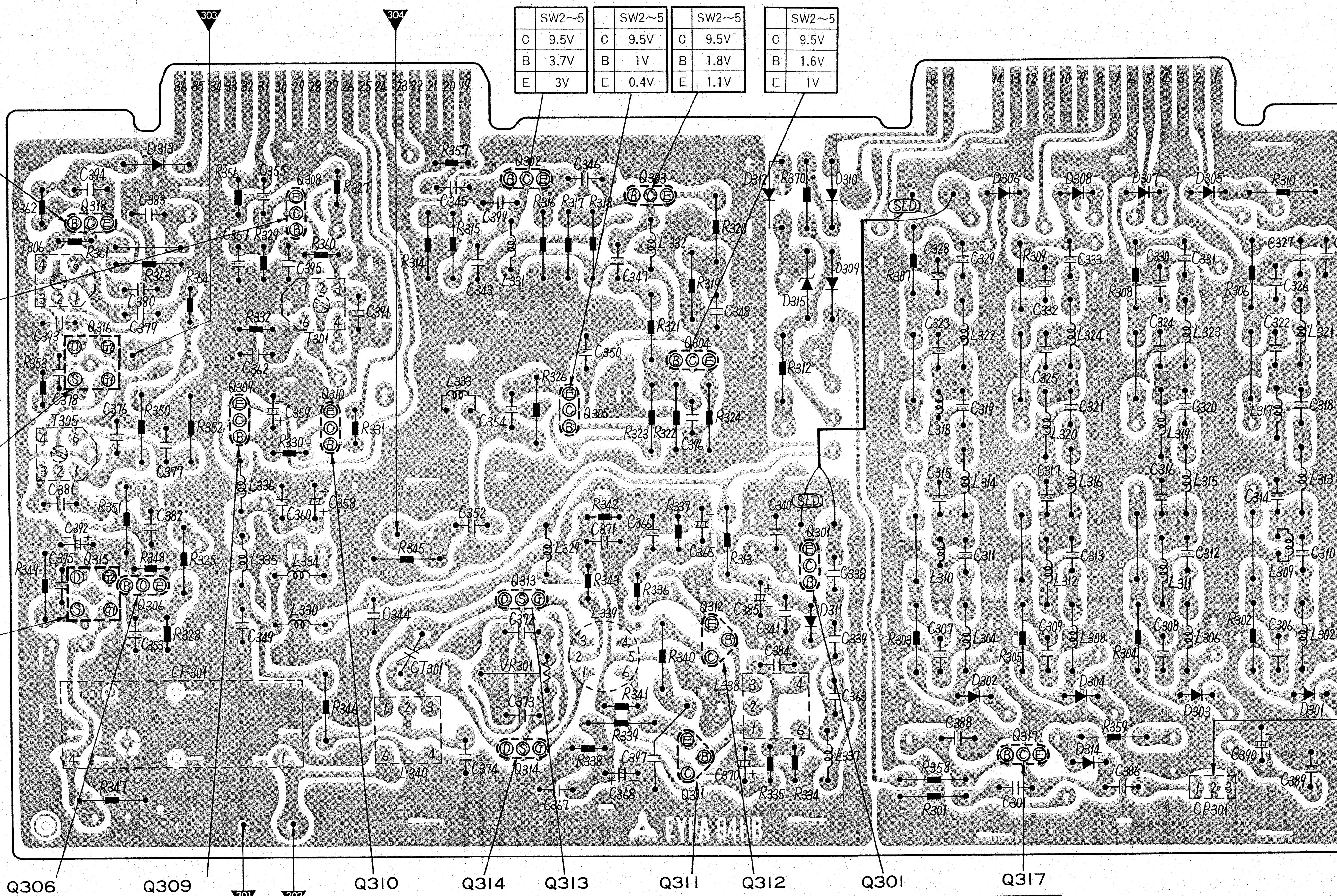

9UP
10UP
SLD
C1608
C1510
CS102
CN23
To 11UPa
CP23
To Page 43
CN42
To 11UPa
CP42
To Page 43
To 18UP
To CS101 No6
To Page 53
To CS101 No12
To CS102 No 55
To Page 42
CN24
To 11UPa
CP24
To Page 43
CN25
To 11UPa
CP25
To Page 43
To 17UP No 35
To 17UP No 36


Cathode
Anode

D1501~1503

3 UP, 13 UPa, b **3 UP, 13 UPa, b**

CIRCUIT BOARD WIRING VIEW (3 UP, 13 UPa, b)


303
304
301
302
SLD
CE301
CT301
VR301
CP301
T305
T306
T301
L340
EYPA 94HB

Q302

	SW2~5
C	9.5V
B	3.7V
E	3V

Q305

	SW2~5
C	9.5V
B	1V
E	0.4V

Q303

	SW2~5
C	9.5V
B	1.8V
E	1.1V

Q304

	SW2~5
C	9.5V
B	1.6V
E	1V

Q318

	SW2~5
C	9.7V
B	1.6V
E	0.9V

Q308

	SW2~5
C	0.4V
B	3.1V
E	3.8V

Q316

	SW2~5
D	7.3V
G1	0V
G2	0V
S	0.2V

Q315

	SW2~5
D	6.1V
G1	0V
G2	3.2V
S	0.4V

Q306

	SW2~5 AGC ON	SW2~5 AGC OFF
C	0V	3.2V
B	0.6V	0V
E	0V	0V

Q309

	SW2~5	
C	9.8V	0V
B	9.1V	9.3V
E	9.8V	9.8V

Q310

	SW2~5	
C	0V	9.3V
B	0.7V	0V
E	0V	0V

Q314

	SW2~5
D	9.5V
G	0V
S	1V

Q313

	SW2~5
D	9.5V
G	0V
S	1V

Q311

	SW2~5
C	9.5V
B	0.7V
E	0.1V

Q312

	SW2~5
C	9.5V
B	0.7V
E	0.1V

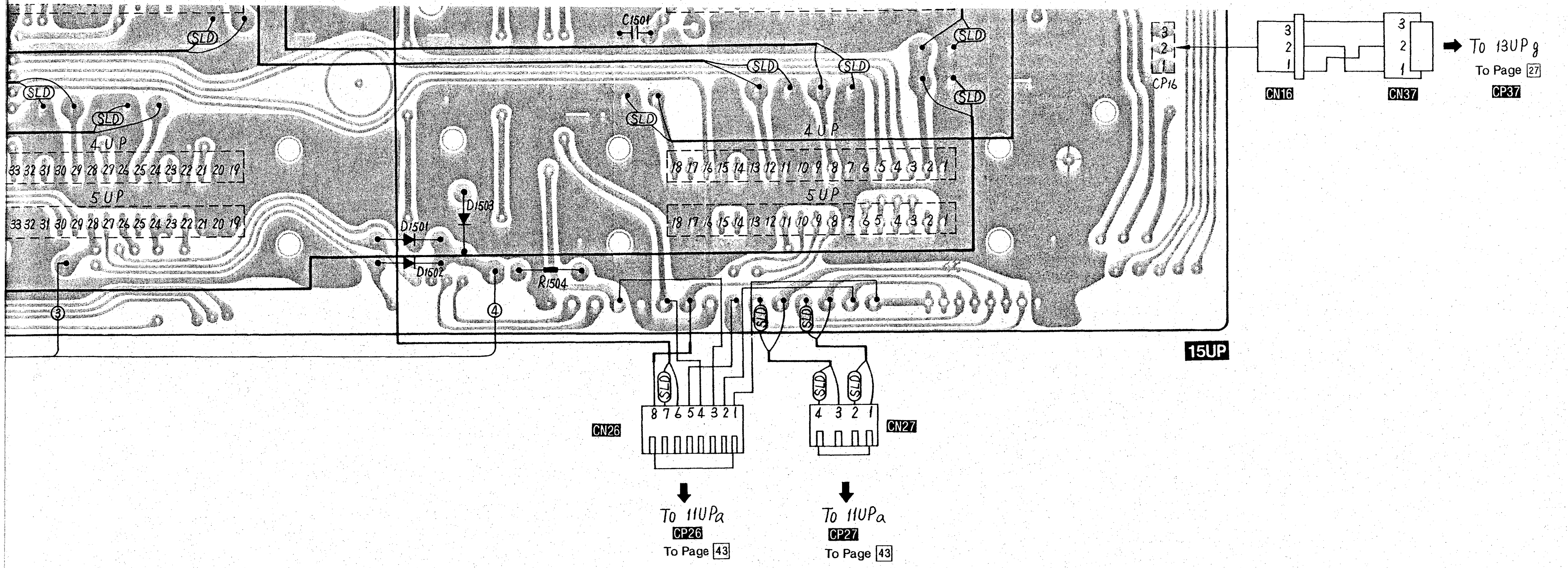
Q301

	SW2~5
C	9.3V
B	0.2V
E	0V

Q317

	SW2~5 RF GAIN MIN
C	0V
B	0.6V
E	0V

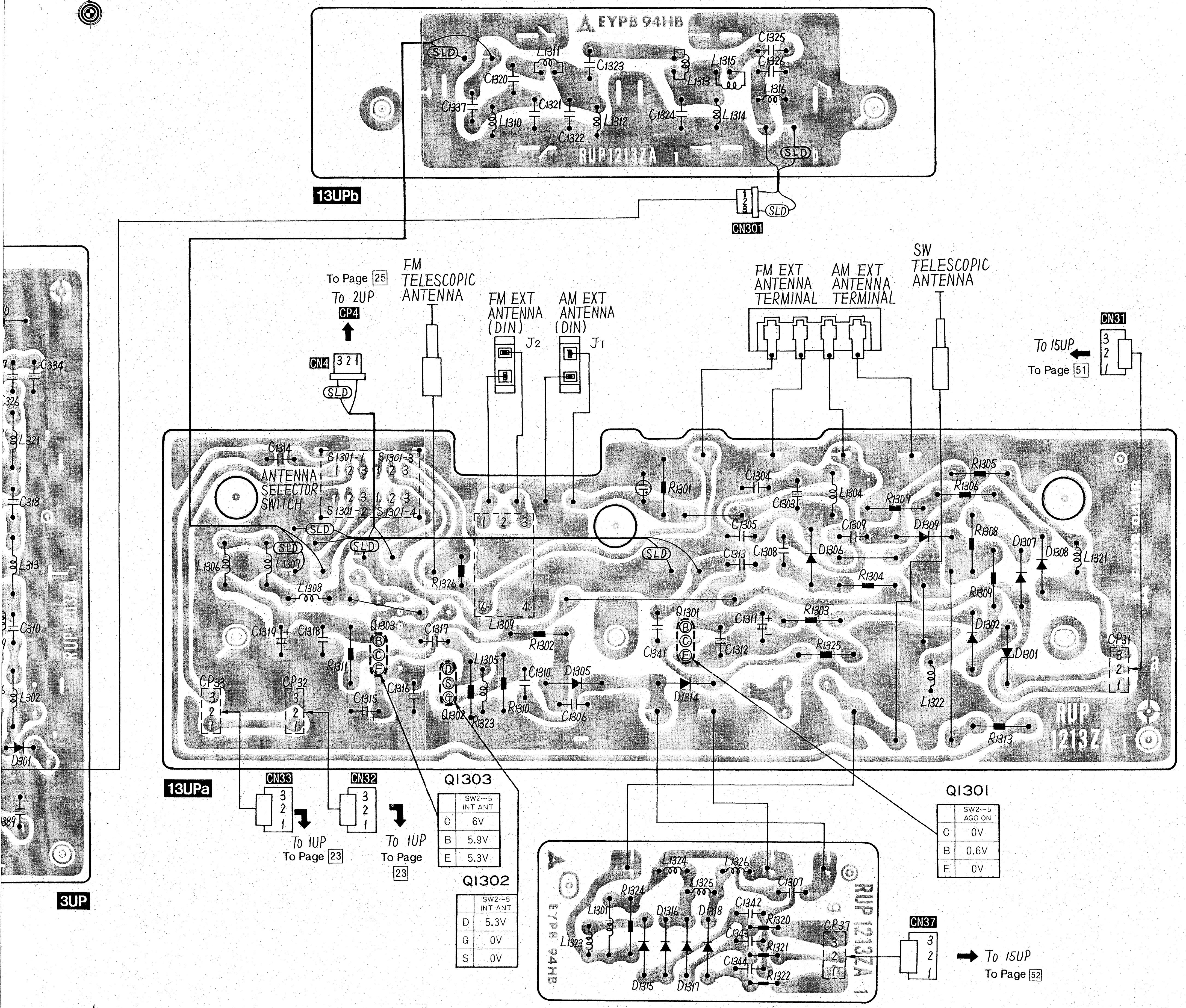
G1 **G2**



SLD
C1501
4UP
5UP
D1501
D1502
D1503
R1504
CP16
CN16
CN37
CP37
→ To 13UPg
To Page 27
15UP
CN26
CN27
8 7 6 5 4 3 2 1
4 3 2 1
To 11UPa
CP26
To Page 43
To 11UPa
CP27
To Page 43

3 UP, 13 UPa, b **3 UP, 13 UPa, b**

, b) . . .SW2~5 BPF, RF—IF & ANTENNA CIRCUIT



EYPB 94HB
RUP1213ZA 1
13UPb
SLD
C1320
C1321
C1322
C1323
C1324
C1325
C1326
C1337
L1310
L1311
L1312
L1313
L1314
L1315
L1316
CN301
To Page 25
To 2UP
CP4
CN4
FM TELESCOPIC ANTENNA
FM EXT ANTENNA (DIN)
J2
AM EXT ANTENNA (DIN)
J1
FM EXT ANTENNA TERMINAL
AM EXT ANTENNA TERMINAL
SW TELESCOPIC ANTENNA
CN31
To 15UP
To Page 51
ANTENNA SELECTOR SWITCH
S1301-1
S1301-2
S1301-3
S1301-4
C1314
R1301
C1304
C1303
L1304
R1307
R1305
R1306
C1305
C1309
D1309
R1308
D1307
D1308
L1321
C1313
C1308
D1306
R1304
R1326
L1306
L1307
L1308
L1309
R1309
C1319
C1318
R1311
Q1303
C1317
R1302
Q1301
C1311
R1303
D1302
C1341
C1312
R1325
D1301
CP31
CP33
CP32
C1316
C1315
L1305
C1310
D1305
D1314
Q1302
R1323
R1310
C1306
L1322
R1313
RUP 1213ZA 1
13UPa
CN33
CN32
To 1UP
To Page 23
To 1UP
To Page 23
3UP
RUP1203ZA
C334
C326
L321
C318
L313
C310
L302
D301
C389
L1324
L1326
L1325
R1324
C1307
L1301
D1316
D1318
C1342
R1320
CP37
C1343
R1321
L1323
C1344
R1322
D1315
D1317
CN37
To 15UP
To Page 52

Q1303

	SW2~5 INT ANT
C	6V
B	5.9V
E	5.3V

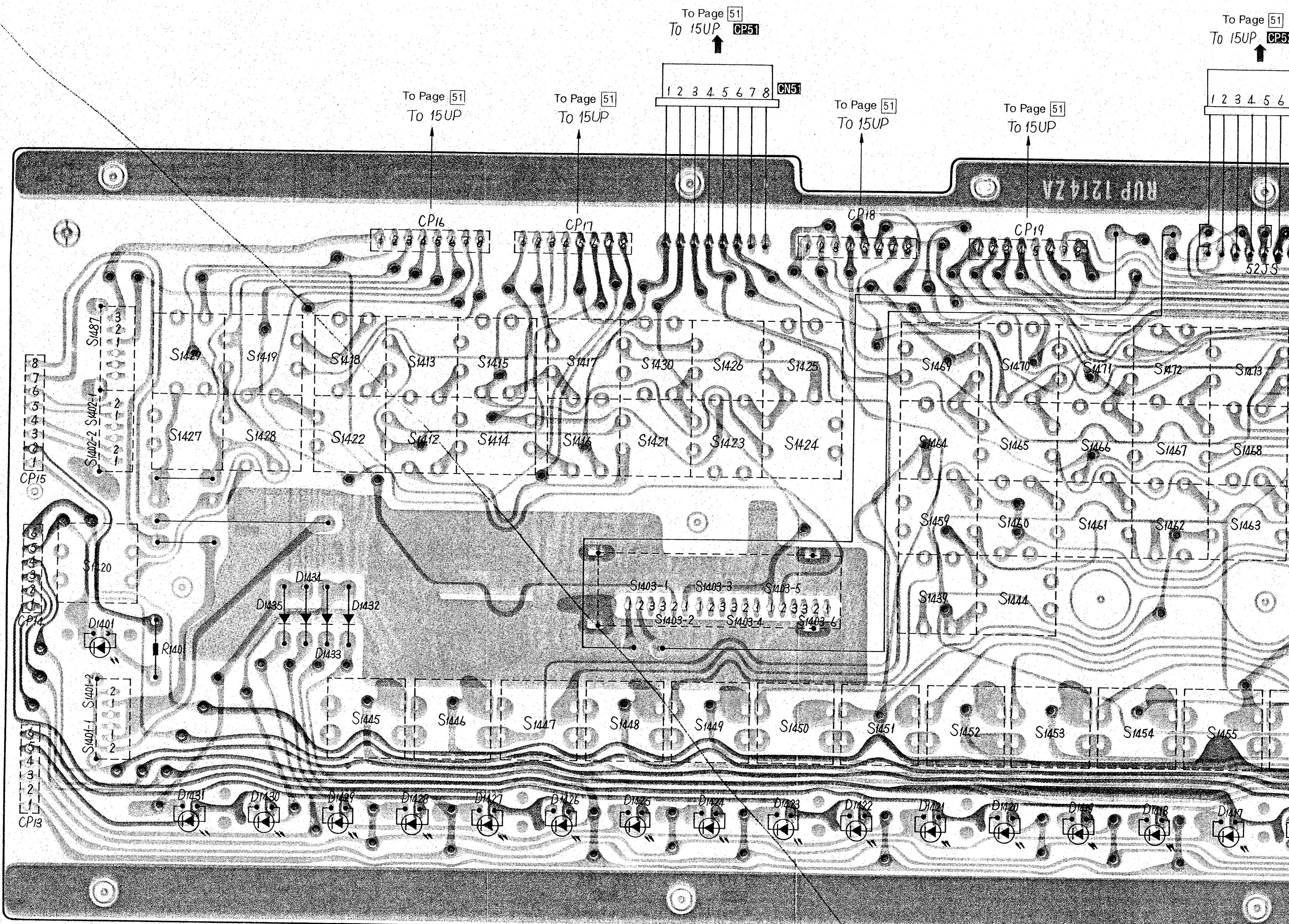
Q1302

	SW2~5 INT ANT
D	5.3V
G	0V
S	0V

Q1301

	SW2~5 AGC ON
C	0V
B	0.6V
E	0V

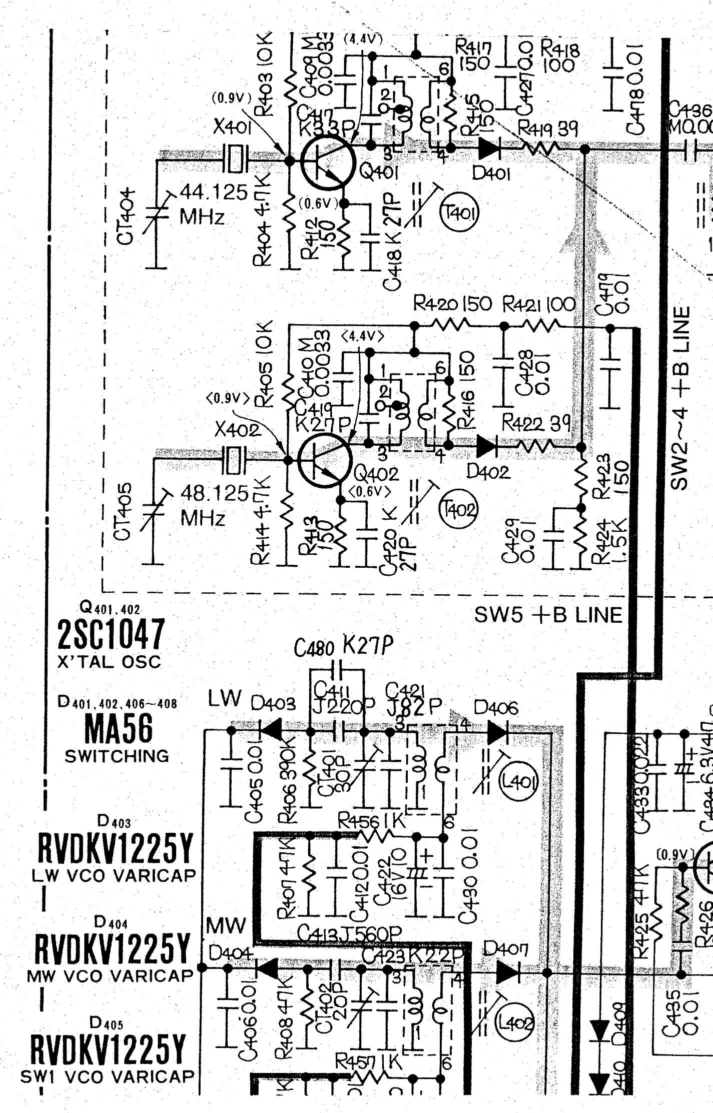
CIRCUIT BOARD WIRING VIEW


To Page 51
To 15UP
CP51
CN51
1 2 3 4 5 6 7 8
RUP 1214ZA
CP13
CP14
CP15
CP16
CP17
CP18
CP19
S1401-1
S1401-2
S1402-1
S1402-2
S1403-1
S1403-2
S1403-3
S1403-4
S1403-5
S1403-6
S1420
S1427
S1428
S1429
S1419
S1418
S1422
S1413
S1412
S1414
S1415
S1416
S1417
S1421
S1423
S1424
S1425
S1426
S1430
S1439
S1444
S1445
S1446
S1447
S1448
S1449
S1450
S1451
S1452
S1453
S1454
S1455
S1459
S1460
S1461
S1462
S1463
S1464
S1465
S1466
S1467
S1468
S1469
S1470
S1471
S1472
S1473
D1401
R1401
D1417
D1418
D1419
D1420
D1421
D1422
D1423
D1424
D1425
D1426
D1427
D1428
D1429
D1430
D1431
D1432
D1433
D1434
D1435

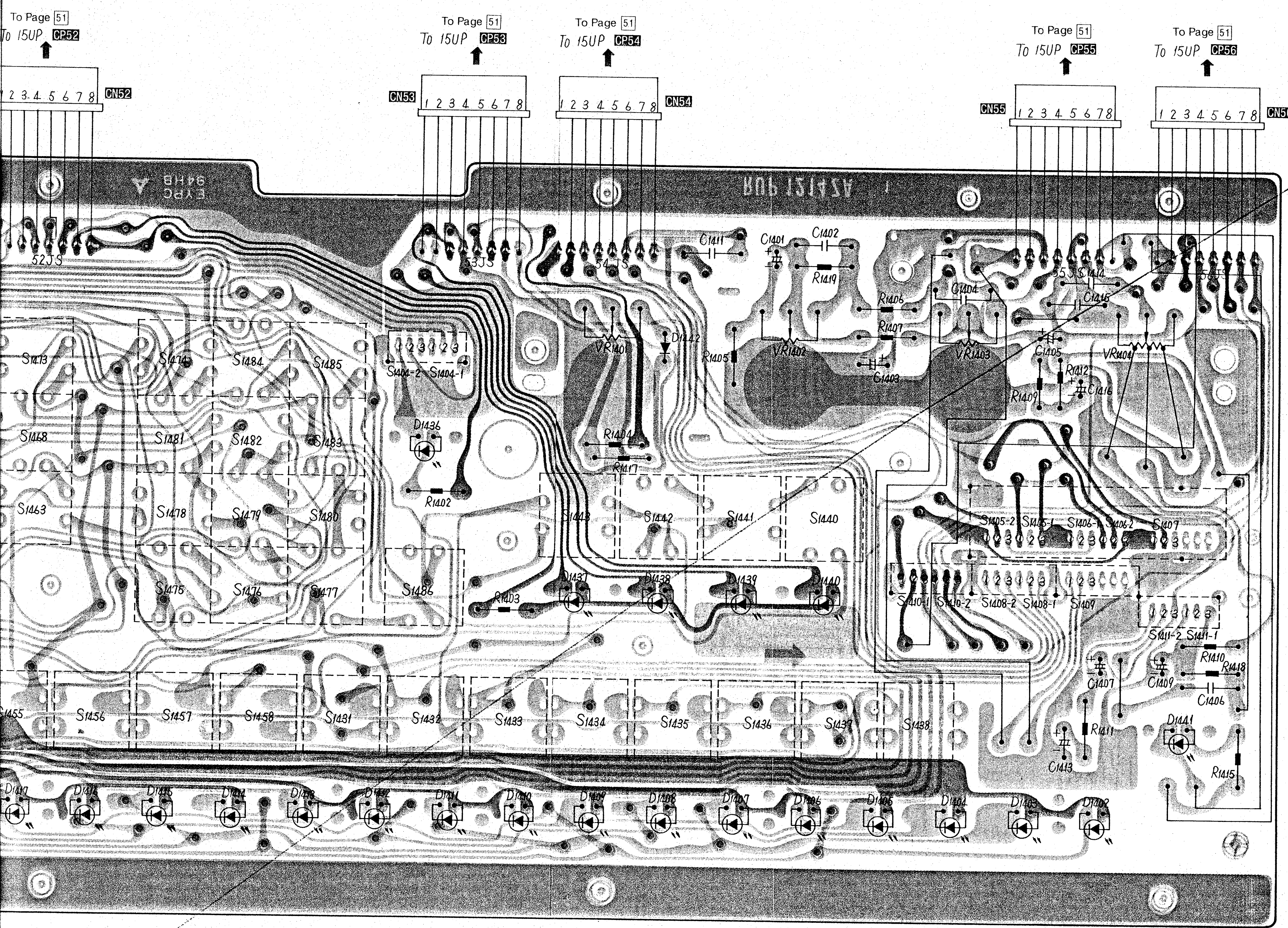
14UP

Remarques:

1. S1401: Commutateur marche/arrêt du l'éclairage en position "Arrêt".
2. S1402-1, S1402-2: Interrupteur de signal horaire.
3. S1403-1~S1403-2: Commutateur du sélecteur de programme en position "Manual" (manuel).
4. S1404-1, S1404-2: Interrupteur de blocage d'accord.
5. S1405-1, S1405-2: Interrupteur de bande AM étroite (Narrow).
6. S1406-1, S1406-2: Interrupteur de bande AM moyenne (MED).
7. S1407 : Interrupteur de bande AM garge (Wide).
8. S1408-1, S1408-2: Commutateur d'écrêteur automatique de bruit (ANL).
9. S1409: Interrupteur de haut-parleur d'aigus (Tweeter).
10. S1410-1, S1410-2: Commutateur Signal/Battery en position "Battery" (piles).
11. S1411-1, S1411-2: Interrupteur de Loudness.
12. S1412: Réglage Mois/Heure: avance.
13. S1413: Réglage Mois/Heure: retour en arrière.
14. S1414: Réglage Minutes/Date: avance.
15. S1415: Réglage Minutes/Date: retour en arrière.
16. S1416: Interrupteur d'avance de l'affichage cu canal.
17. S1417: Interrupteur de recul de l'affichage du canal.
18. S1418: Interrupteur 12/24 heures.
19. S1419: Commutateur "Sommeil".
20. S1420: Marche/arrêt.
21. S1421: Commutateur d'inversion de jour de programmation.
22. S1422: Interrupteur d'avance du jour de programmation (Day UP).
23. S1423: Interrupteur de mémoire journalière.
24. S1424: Interrupteur de contrôle de mémoire de programmation.
25. S1425: Commutateur de programmateur ON/OFF.
26. S1426: Interrupteur d'effacement de mémoire de programmation.
27. S1427: Interrupteur d'affichage Mois/Date.
28. S1428: Interrupteur d'affichage de l'heure sur un autre fuseau horaire.
29. S1429: Interrupteur d'affichage de l'heure.
30. S1430: Commutateur de programmation unique.
31. S1431: Touche de syntonisation automatique sur 15,3 MHz.
32. S1432: Touche de syntonisation automatique sur 17,8 MHz.
33. S1433: Touche de syntonisation automatique sur 21,2 MHz.
34. S1434: Touche de syntonisation automatique sur 21,6 MHz.
35. S1435: Touche de syntonisation automatique sur 25,9 MHz.
36. S1436: Touche de syntonisation automatique sur 28,5 MHz.
37. S1437: Touche de syntonisation automatique sur 95 MHz.
38. S1438: Touche de syntonisation automatique sur 101 MHz.
39. S1439: Interrupteur de lecture de mémoire et arrêt sur mémoire.
40. S1440: Interrupteur de fréquence AM pas à pas 1/5 kHz.
41. S1441: Interupteur de fréquence AM pas à pas 100/500 Hz.
42. S1442: Interrupteur de fréquence USB/CW pas à pas 100/500 Hz.
43. S1443: Interrupteur de fréquence LSB/CW pas à pas 100/500 Hz.
44. S1444: Interrupteur de mémoire.
45. S1445: Touche de syntonisation automatique sur 0,2 MHz.
46. S1446: Touche de syntonisation automatique sur 0,8 MHz.
47. S1447: Touche de syntonisation automatique sur 1,3 MHz.
48. S1448: Touche de syntonisation automatique sur 1,9 MHz.
49. S1449: Touche de syntonisation automatique sur 2,4 MHz.


Q401, 402
2SC1047
X'TAL OSC
D401, 402, 406~408
MA56
SWITCHING
D403
RVDKV1225Y
LW VCO VARICAP
D404
RVDKV1225Y
MW VCO VARICAP
D405
RVDKV1225Y
SW1 VCO VARICAP
X401
44.125 MHz
CT404
X402
48.125 MHz
CT405
Q401
Q402
D401
D402
T401
T402
R403 10K
R404 4.7K
R405 10K
R414 4.7K
R415 150
R416 150
R417 150
R418 100
R419 39
R420 150
R421 100
R422 39
R423 150
R424 1.5K
C417 K33P
C418 K27P
C420 K27P
C427 0.01
C428 0.01
C429 0.01
C478 0.01
C480 K27P
C411 J220P
C421 J82P
C413 J560P
C423 K22P
C405 0.01
C406 0.01
C412 0.01
C490 0.01
R456 1K
R457 1K
L401
L402
(0.9V)
(0.6V)
(4.4V)
SW2~4 +B LINE
SW5 +B LINE
LW
MW
D406
D407

VIEW (14 UP) . . . KEY BOARD CIRCUIT

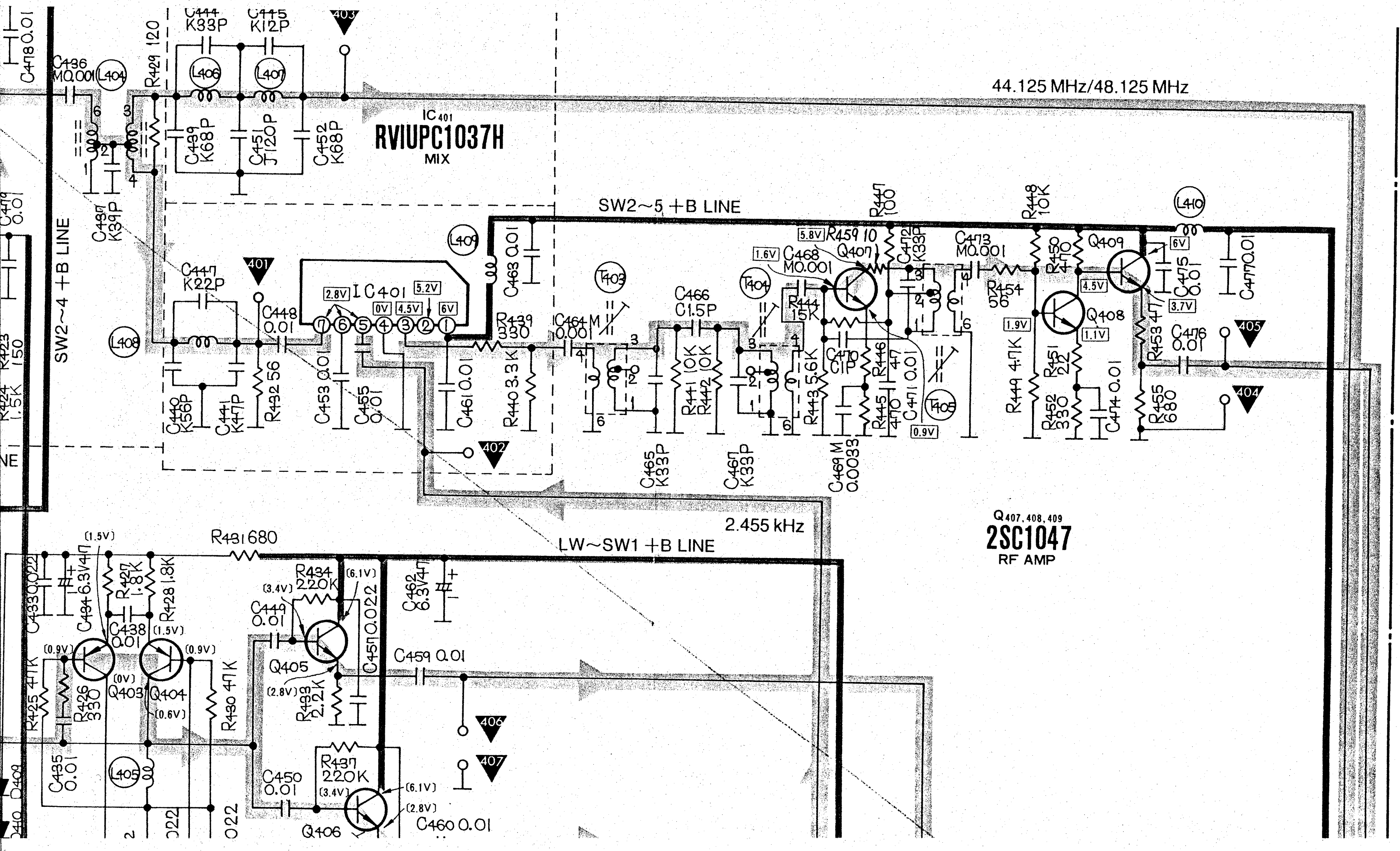

To Page 51
To 15UP CP52
To 15UP CP53
To 15UP CP54
To 15UP CP55
To 15UP CP56
CN52
CN53
CN54
CN55
CN56
1 2 3 4 5 6 7 8
VR1401
VR1402
VR1403
VR1404
S1440
S1441
S1442
S1443
S1456
S1457
S1458
S1431
S1432
S1433
S1434
S1435
S1436
S1437
S1438
S1474
S1484
S1485
S1481
S1482
S1483
S1478
S1479
S1480
S1475
S1476
S1477
S1486
D1436
D1437
D1438
D1439
D1440
D1441
R1402
R1403
R1404
R1405
R1406
R1407
R1409
R1410
R1411
R1412
R1415
R1417
R1418
R1419
C1401
C1402
C1403
C1404
C1405
C1406
C1407
C1409
C1411
C1413
C1415
C1416
S1404-2 S1404-1
S1405-2
S1407
S1408-2 S1408-1
S1409
S1411-2 S1411-1

MHz.
MHz.
MHz.
MHz.
Hz.
MHz.
némoire.
z.
0 Hz.
100/

100/

Hz.
Hz.
Hz.
Hz.
Hz.

50. S1450: Touche de syntonisation automatique sur 3,3 MHz.
51. S1451: Touche de syntonisation automatique sur 3,5 MHz.
52. S1452: Touche de syntonisation automatique sur 4,0 MHz.
53. S1453: Touche de syntonisation automatique sur 4,9 MHz.
54. S1454: Touche de syntonisation automatique sur 6,1 MHz.
55. S1455: Touche de syntonisation automatique sur 7,1 MHz.
56. S1456: Touche de syntonisation automatique sur 9,6 MHz.
57. S1457: Touche de syntonisation automatique sur 11,8 MHz.
58. S1458: Touche de syntonisation automatique sur 14,2 MHz.
59. S1459: Commutateur de présélection de syntonisation du canal 1.
60. S1460: Commutateur de présélection de syntonisation du canal 2.
61. S1461: Commutateur de présélection de syntonisation du canal 3.
62. S1462: Commutateur de présélection de syntonisation du canal 4.
63. S1463: Commutateur de présélection de syntonisation du canal 5.
64. S1464: Commutateur de présélection de syntonisation du canal 6.
65. S1465: Commutateur de présélection de syntonisation du canal 7.
66. S1466: Commutateur de présélection de syntonisation du canal 8.
67. S1467: Commutateur de présélection de syntonisation du canal 9.
68. S1468: Commutateur de présélection de syntonisation du canal 10.
69. S1469: Commutateur de présélection de syntonisation du canal 11.
70. S1470: Commutateur de présélection de syntonisation du canal 12.
71. S1471: Commutateur de présélection de syntonisation du canal 13.
72. S1472: Commutateur de présélection de syntonisation du canal 14.
73. S1473: Commutateur de présélection de syntonisation du canal 15.
74. S1474: Touche de syntonisation directe 0.
75. S1475: Touche de syntonisation directe 1.
76. S1476: Touche de syntonisation directe 2.
77. S1477: Touche de syntonisation directe 3.
78. S1478: Touche de syntonisation directe 4.
79. S1479: Touche de syntonisation directe 5.
80. S1480: Touche de syntonisation directe 6.
81. S1481: Touche de syntonisation directe 7.
82. S1482: Touche de syntonisation directe 8.
83. S1483: Touche de syntonisation directe 9.
84. S1484: Touche de syntonisation directe •.
85. S1485: Touche de fin de syntonisation directe.
86. S1486: Touche de début de syntonisation directe.
87. S1487: Interrupteur de réglage de l'horloge.
88. VR1401 . . . Contrôle de gain, VR1402 . . . Bass control, VR1403 . . . Treble control, VR1404 . . . Volume control.


44.125 MHz/48.125 MHz
IC401
RVIUPC1037H
MIX
SW2~5 +B LINE
SW2~4 +B LINE
LW~SW1 +B LINE
2.455 kHz
Q407, 408, 409
2SC1047
RF AMP
Q403
Q404
Q405
Q406
Q407
Q408
Q409
R431 680
C444 K33P
C445 K12P
C436 M0.001
C447 K22P
C448 0.01
C466 C1.5P
C468 M0.001
C473 M0.001
C459 0.01
C460 0.01
C450 0.01
R437 2.20K
R434 2.20K

electronics voltmeter from negative te
of battery.

▭ . . . SW2~SW5 position,
( ) . . . SW2~SW4 position,
〈 〉 . . . SW5 position,
[ ] . . . LW, MW, SW1 position.

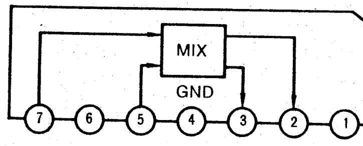
Bemerkungen:

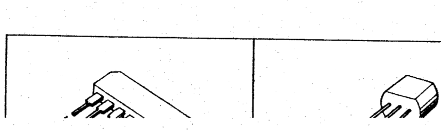
1. Die Markierung (▼) bezeichnet Meßpunkt, z.B: ▼= Meßpunkt 1.
2. Alle Gleichspannungen sind mit Elektronikvoltmeter vom negativen Ba anschluß aus zu messen.
   ▭ . . . Stellung „KW2~KW5",
   ( ) . . . Stellung, „KW2~KW4",
   〈 〉 . . . Stellung „KW5",
   [ ] . . . Stellung „LW, MW, KW 1".

Remarques:

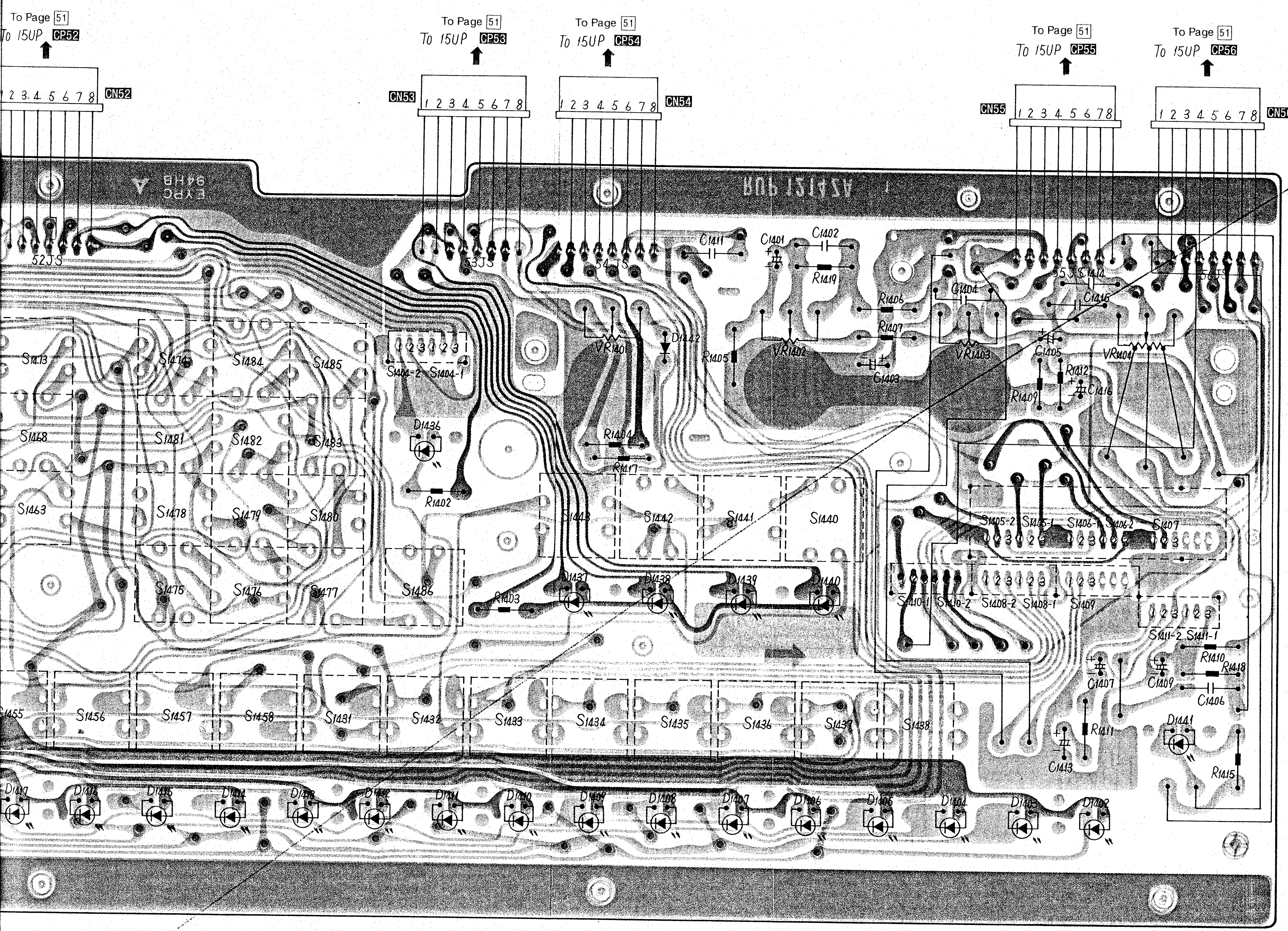
1. La marque (▼) signale un poi vérification. EX.: ▼ =point de vérificati
2. La tension c.c. est meaurée au moye voltmétre électronique à partir de la négative de la pile.
   ▭ . . . Position OC2~OC5,
   ( ) . . . Position OC2~OC4,
   〈 〉 . . . Position OC5,
   [ ] . . . Position GO, PO, OC1.

IC401 RVIUPC1037H


MIX
GND
7
6
5
4
3
2
1



VIEW (14 UP). . . KEY BOARD CIRCUIT


To Page 51
To 15UP CP52
To Page 51
To 15UP CP53
To Page 51
To 15UP CP54
To Page 51
To 15UP CP55
To Page 51
To 15UP CP56
CN52
CN53
CN54
CN55
CN56
1 2 3 4 5 6 7 8
S1413
S1474
S1484
S1485
S1468
S1481
S1482
S1483
S1463
S1478
S1479
S1480
S1475
S1476
S1477
S1486
S1404-2 S1404-1
D1436
R1402
R1403
VR1401
VR1402
VR1403
VR1404
D1442
R1405
R1404
R1417
C1411
C1401
C1402
R1419
R1406
R1407
C1403
C1404
C1405
C1415
C1416
R1412
R1409
S1443
S1442
S1441
S1440
D1437
D1438
D1439
D1440
S1405-2 S1405-1 S1406-1 S1406-2 S1407
S1410-1 S1410-2 S1408-2 S1408-1 S1409
S1411-2 S1411-1
R1410
R1418
C1407
C1409
C1406
C1413
R1411
D1441
R1415
S1455
S1456
S1457
S1458
S1431
S1432
S1433
S1434
S1435
S1436
S1437
S1438

MHz.
MHz.
MHz.
MHz.
Hz.
MHz.
némoire.
lz.
0 Hz.
100/

100/

MHz.
MHz.
MHz.
MHz.
MHz.

50. S1450: Touche de syntonisation automatique sur 3,3 MHz.
51. S1451: Touche de syntonisation automatique sur 3,5 MHz.
52. S1452: Touche de syntonisation automatique sur 4,0 MHz.
53. S1453: Touche de syntonisation automatique sur 4,9 MHz.
54. S1454: Touche de syntonisation automatique sur 6,1 MHz.
55. S1455: Touche de syntonisation automatique sur 7,1 MHz.
56. S1456: Touche de syntonisation automatique sur 9,6 MHz.
57. S1457: Touche de syntonisation automatique sur 11,8 MHz.
58. S1458: Touche de syntonisation automatique sur 14,2 MHz.
59. S1459: Commutateur de présélection de syntonisation du canal 1.
60. S1460: Commutateur de présélection de syntonisation du canal 2.
61. S1461: Commutateur de présélection de syntonisation du canal 3.
62. S1462: Commutateur de présélection de syntonisation du canal 4.
63. S1463: Commutateur de présélection de syntonisation du canal 5.
64. S1464: Commutateur de présélection de syntonisation du canal 6.
65. S1465: Commutateur de présélection de syntonisation du canal 7.
66. S1466: Commutateur de présélection de syntonisation du canal 8.
67. S1467: Commutateur de présélection de syntonisation du canal 9.
68. S1468: Commutateur de présélection de syntonisation du canal 10.
69. S1469: Commutateur de présélection de syntonisation du canal 11.
70. S1470: Commutateur de présélection de syntonisation du canal 12.
71. S1471: Commutateur de présélection de syntonisation du canal 13.
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74. S1474: Touche de syntonisation directe 0.
75. S1475: Touche de syntonisation directe 1.
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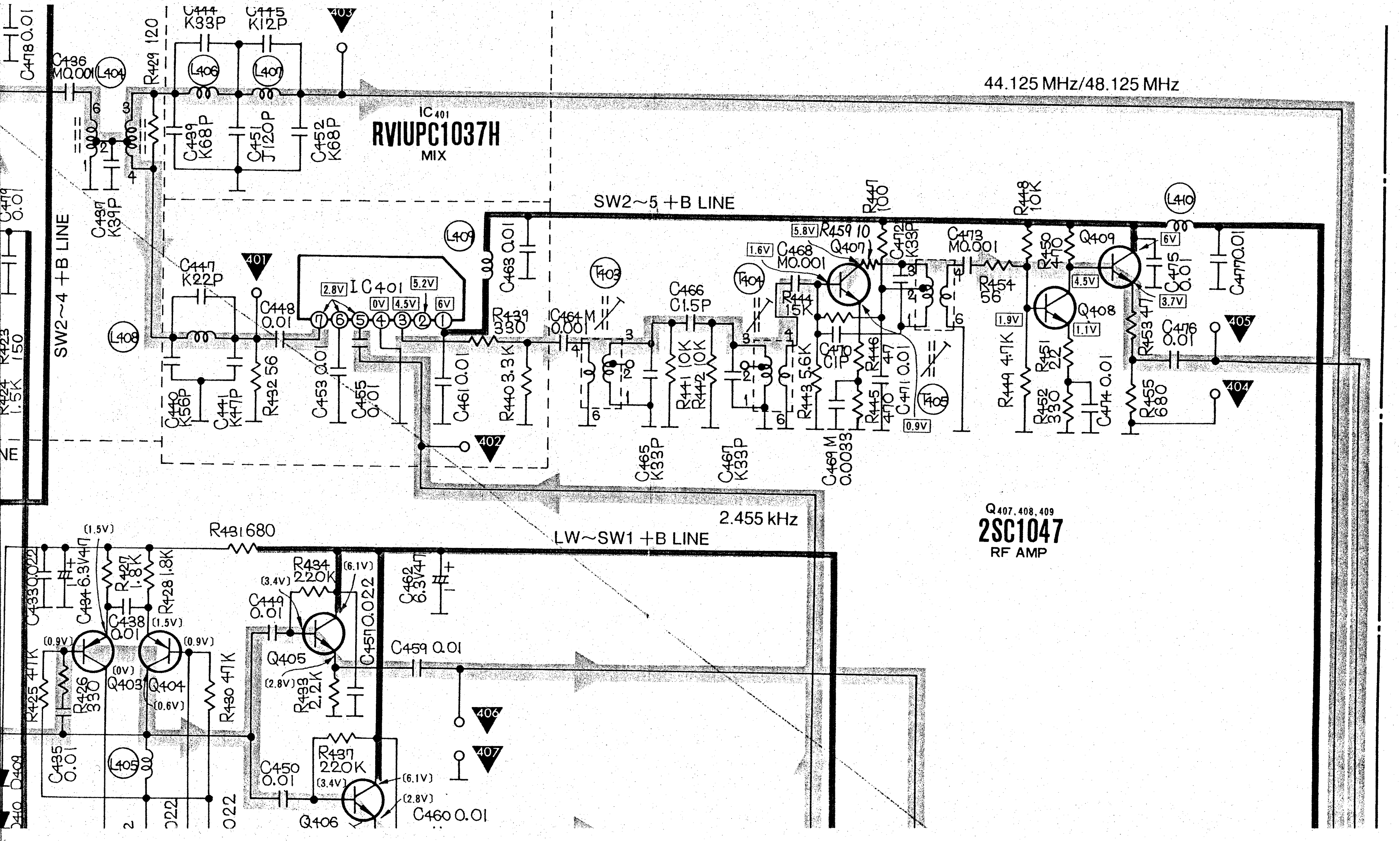
77. S1477: Touche de syntonisation directe 3.
78. S1478: Touche de syntonisation directe 4.
79. S1479: Touche de syntonisation directe 5.
80. S1480: Touche de syntonisation directe 6.
81. S1481: Touche de syntonisation directe 7.
82. S1482: Touche de syntonisation directe 8.
83. S1483: Touche de syntonisation directe 9.
84. S1484: Touche de syntonisation directe •.
85. S1485: Touche de fin de syntonisation directe.
86. S1486: Touche de début de syntonisation directe.
87. S1487: Interrupteur de réglage de l'horloge.
88, VR1401 . . . Contrôle de gain, VR1402 . . . Bass control, VR1403 . . . Treble control, VR1404 . . . Volume control.


C418 0.01
C436 M0.001
L404
R429 120
C444 K33P
C445 K12P
L406
L407
403
C439 K68P
C451 J120P
C452 K68P
IC401 RVIUPC1037H MIX
44.125 MHz/48.125 MHz
SW2~4 +B LINE
SW2~5 +B LINE
C437 K39P
C447 K22P
401
C448 0.01
2.8V IC401 5.2V
0V 4.5V 6V
L409
C463 0.01
R439 330
C464 M 0.001
T403
C466 C1.5P
T404
C468 M0.001
5.8V R459 10
1.6V
Q407
R441 100
C412 K33P
C473 M0.001
R448 10K
L410
Q409
6V
C415 0.01
C477 0.01
R454 56
4.5V
3.7V
Q408
1.9V
1.1V
R453 47
C476 0.01
405
404
L408
C440 K56P
C441 K47P
R432 56
C453 0.01
C455 0.01
C461 0.01
R440 3.3K
R441 10K
R442 10K
R444 15K
R443 5.6K
C470 C1P
R446 47
R445 470
C471 0.0033
T405
0.9V
R449 47K
R452 330
R451 2.2K
C474 0.01
R455 680
402
C465 K33P
C467 K33P
C469 M 0.0033
R423 1.5K
R424 1.5K
2.455 kHz
LW~SW1 +B LINE
Q407.408.409 2SC1047 RF AMP
R431 680
(1.5V)
C433 0.022
C434 6.3V47
R427 1.8K
R428 1.8K
(3.4V)
R434 2.20K
(6.1V)
C462 6.3V47
C438 0.01
(1.5V)
C449 0.01
(0.9V)
(0.9V)
(0V)
Q403
Q404
(0.6V)
R430 47K
Q405
(2.8V)
R433 2.2K
C451 0.022
C459 0.01
R425 47K
R426 330
406
407
C435 0.01
L405
C450 0.01
R437 2.20K
(3.4V)
(6.1V)
(2.8V)
Q406
C460 0.01

electronics voltmeter from negative te
of battery.
▭ . . . SW2~SW5 position,
( ) . . . SW2~SW4 position,
〈 〉. . . SW5 position,
[ ] . . . LW, MW, SW1 position.

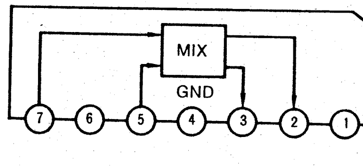
Bemerkungen:

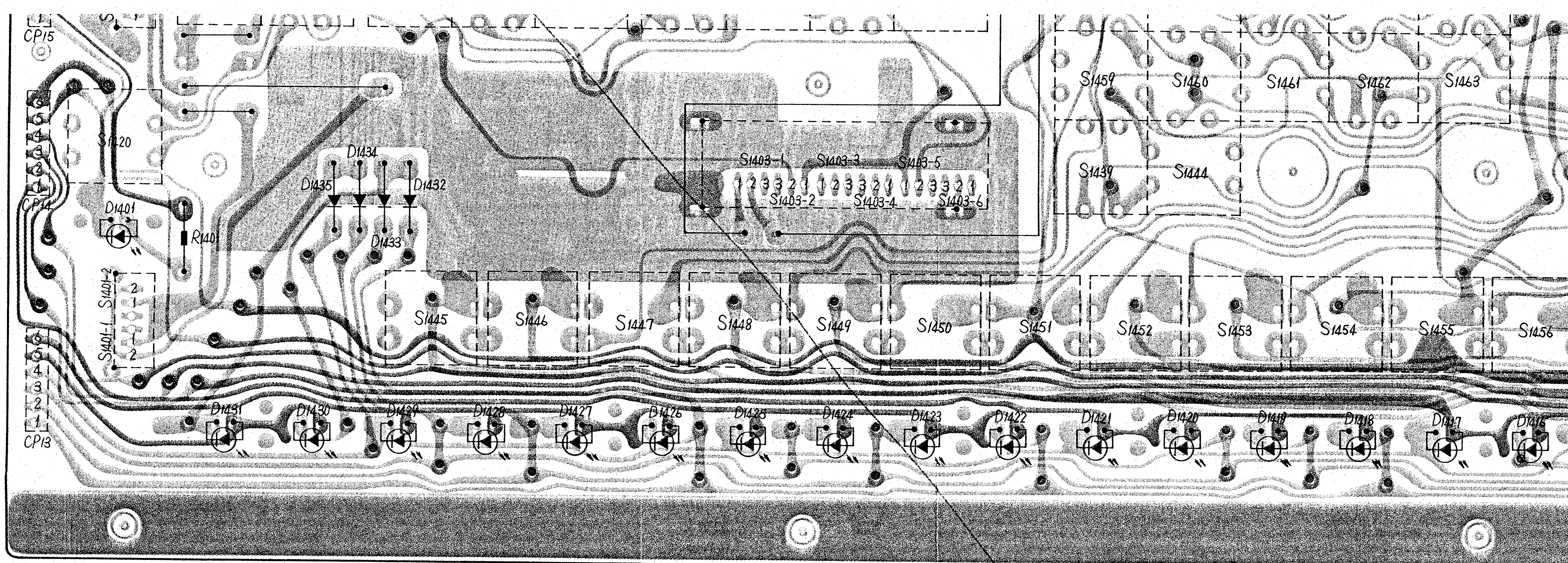
1. Die Markierung (▼) bezeichnet Meßpunkt, z.B: ▼ = Meßpunkt 1.
2. Alle Gleichspannungen sind mit Elektronikvoltmeter vom negativen Ba anschluß aus zu messen.
   ▭ . . . Stellung ,,KW2~KW5'',
   ( ) . . . Stellung, ,,KW2~KW4'',
   〈 〉. . . Stellung ,,KW5'',
   [ ] . . . Stellung ,,LW, MW, KW 1''.

Remarques:

1. La marque (▼) signale un poi vérification. EX.: ▼ =point de vérificati
2. La tension c.c. est meaurée au moyer voltmétre électronique à partir de la négative de la pile.
   ▭ . . .Position OC2~OC5,
   ( ) . . . Position OC2~OC4,
   〈 〉. . . Position OC5,
   [ ] . . . Position GO, PO, OC1.

IC401 RVIUPC1037H

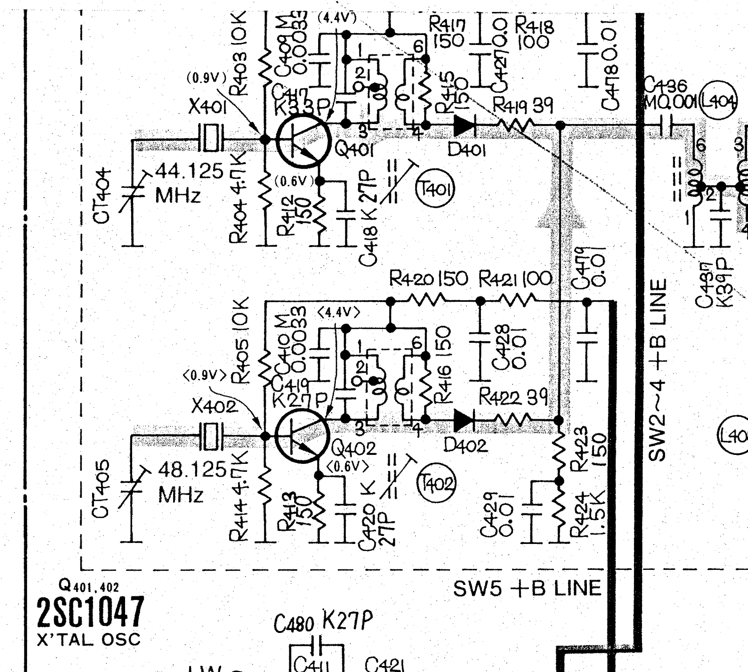

MIX
GND
7
6
5
4
3
2
1


CP15
CP14
CP13
S1420
D1401
R1401
D1434
D1435
D1432
D1433
S1401-2
S1401-1
S1403-1
S1403-3
S1403-5
S1403-2
S1403-4
S1403-6
S1459
S1460
S1461
S1462
S1463
S1439
S1444
S1445
S1446
S1447
S1448
S1449
S1450
S1451
S1452
S1453
S1454
S1455
S1456
D1431
D1430
D1429
D1428
D1427
D1426
D1425
D1424
D1423
D1422
D1421
D1420
D1419
D1418
D1417
D1416

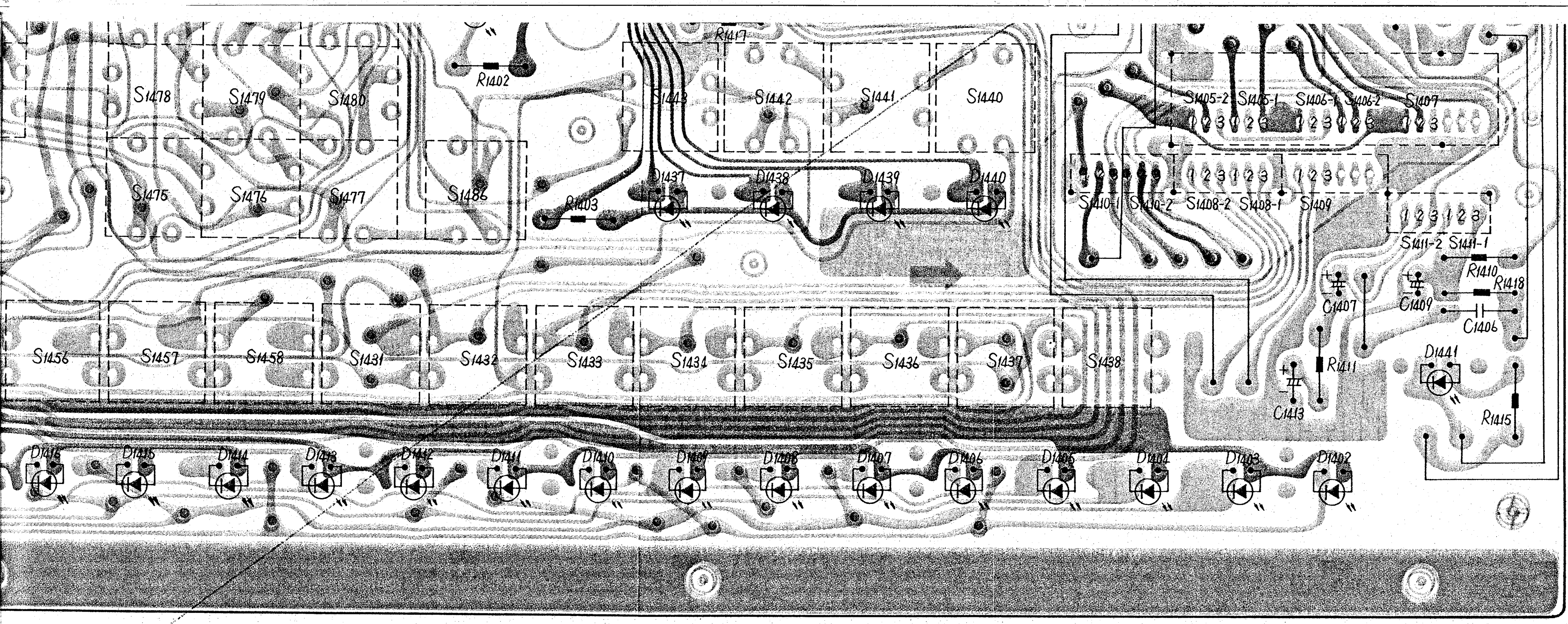
14UP

Remarques:

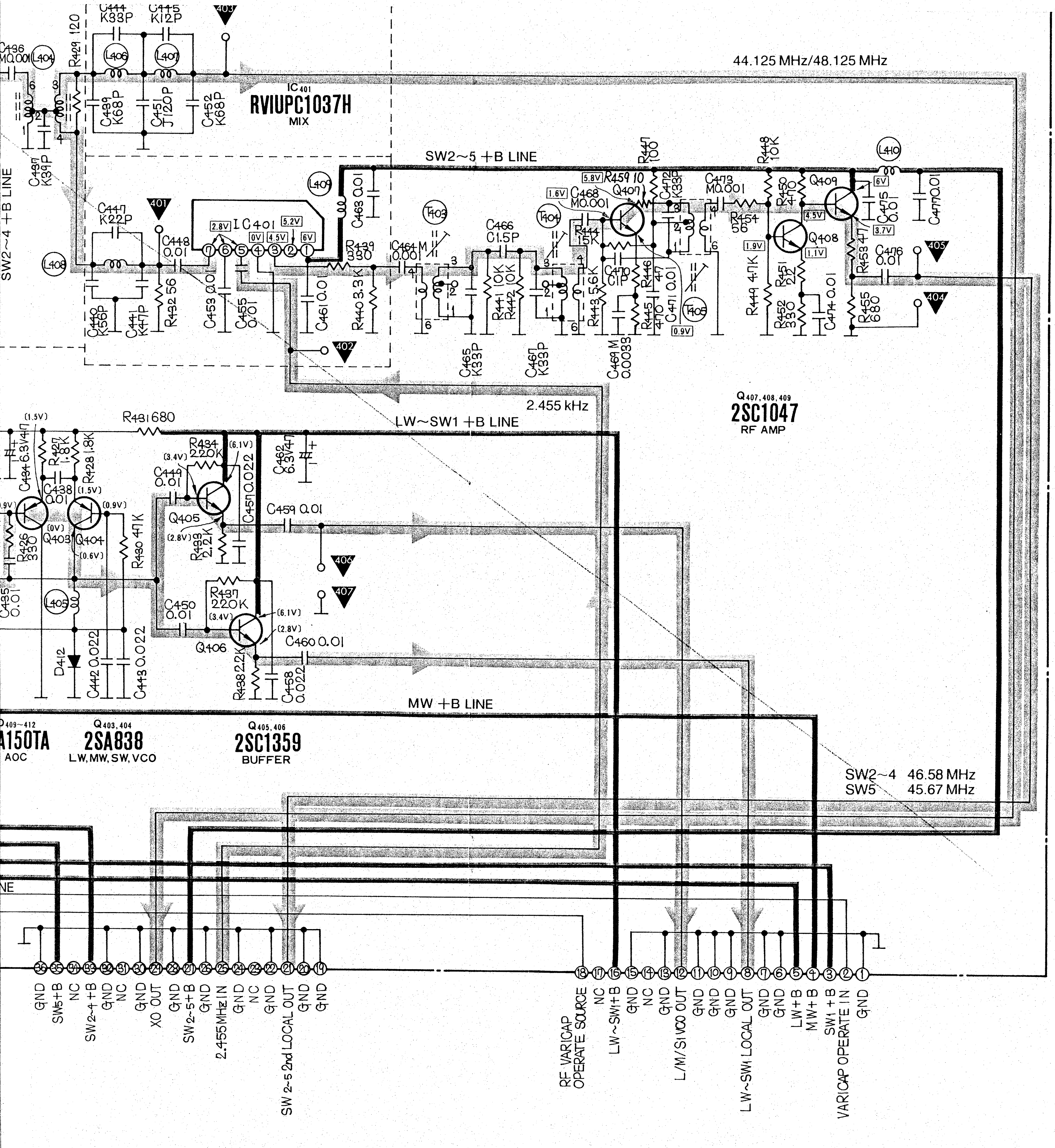
1. S1401: Commutateur marche/arrêt du l'éclairage en position "Arrêt".
2. S1402-1, S1402-2: Interrupteur de signal horaire.
3. S1403-1~S1403-2: Commutateur du sélecteur de programme en position "Manual" (manuel).
4. S1404-1, S1404-2: Interrupteur de blocage d'accord.
5. S1405-1, S1405-2: Interrupteur de bande AM étroite (Narrow).
6. S1406-1, S1406-2: Interrupteur de bande AM moyenne (MED).
7. S1407 : Interrupteur de bande AM garge (Wide).
8. S1408-1, S1408-2: Commutateur d'écrêteur automatique de bruit (ANL).
9. S1409: Interrupteur de haut-parleur d'aigus (Tweeter).
10. S1410-1, S1410-2: Commutateur Signal/Battery en position "Battery" (piles).
11. S1411-1, S1411-2: Interrupteur de Loudness.
12. S1412: Réglage Mois/Heure: avance.
13. S1413: Réglage Mois/Heure: retour en arrière.
14. S1414: Réglage Minutes/Date: avance.
15. S1415: Réglage Minutes/Date: retour en arrière.
16. S1416: Interrupteur d'avance de l'affichage cu canal.
17. S1417: Interrupteur de recul de l'affichage du canal.
18. S1418: Interrupteur 12/24 heures.
19. S1419: Commutateur "Sommeil".
20. S1420: Marche/arrêt.
21. S1421: Commutateur d'inversion de jour de programmation.
22. S1422: Interrupteur d'avance du jour de programmation (Day UP).
23. S1423: Interrupteur de mémoire journalière.
24. S1424: Interrupteur de contrôle de mémoire de programmation.
25. S1425: Commutateur de programmateur ON/OFF.
26. S1426: Interrupteur d'effacement de mémoire de programmation.
27. S1427: Interrupteur d'affichage Mois/Date.
28. S1428: Interrupteur d'affichage de l'heure sur un autre fuseau horaire.
29. S1429: Interrupteur d'affichage de l'heure.
30. S1430: Commutateur de programmation unique.
31. S1431: Touche de syntonisation automatique sur 15,3 MHz.
32. S1432: Touche de syntonisation automatique sur 17,8 MHz.
33. S1433: Touche de syntonisation automatique sur 21,2 MHz.
34. S1434: Touche de syntonisation automatique sur 21,6 MHz.
35. S1435: Touche de syntonisation automatique sur 25,9 MHz.
36. S1436: Touche de syntonisation automatique sur 28,5 MHz.
37. S1437: Touche de syntonisation automatique sur 95 MHz.
38. S1438: Touche de syntonisation automatique sur 101 MHz.
39. S1439: Interrupteur de lecture de mémoire et arrêt sur mémoire.
40. S1440: Interrupteur de fréquence AM pas à pas 1/5 kHz.
41. S1441: Interupteur de fréquence AM pas à pas 100/500 Hz.
42. S1442: Interrupteur de fréquence USB/CW pas à pas 100/500 Hz.
43. S1443: Interrupteur de fréquence LSB/CW pas à pas 100/500 Hz.
44. S1444: Interrupteur de mémoire.
45. S1445: Touche de syntonisation automatique sur 0,2 MHz.
46. S1446: Touche de syntonisation automatique sur 0,8 MHz.
47. S1447: Touche de syntonisation automatique sur 1,3 MHz.
48. S1448: Touche de syntonisation automatique sur 1,9 MHz.
49. S1449: Touche de syntonisation automatique sur 2,4 MHz.


R403 10K
C409 M 0.0033
(4.4V)
R417 150
C427 0.01
R418 100
C418 0.01
C436 M0.001
L404
(0.9V)
X401
C417 K33P
R415 150
R419 39
Q401
D401
44.125 MHz
CT404
R404 4.7K
(0.6V)
R412 150
C418 K27P
T401
R420 150
R421 100
C419 0.01
C437 K39P
SW2~4 +B LINE
R405 10K
C410 M 0.0033
(4.4V)
R416 150
C428 0.01
(0.9V)
X402
C419 K27P
R422 39
Q402
D402
(0.6V)
48.125 MHz
CT405
R414 4.7K
R413 150
C420 K27P
T402
C429 0.01
R423 150
R424 1.5K
L40
SW5 +B LINE
Q401, 402
2SC1047
X'TAL OSC
C480 K27P
D401, 402, 406~408
MA56
SWITCHING
LW
D403
C411 J220P
C421 J82P
D406
(1.5V)
C405 0.01
R406 390K
C481
L401
R456 1K
C433 0.022
C434 6.3V47
R427
D403
RVDKV1225Y
LW VCO VARICAP
R407 4.7K
C412 0.01
C422 16V10
C430 0.01
(0.9V)
R425 4.7K
R426 330
Q40
C413 J560P
MW
D404
C423 K22P
D407
D404
RVDKV1225Y
MW VCO VARICAP
C406 0.01
R408 4.7K
C482
L402
C435 0.01
D409
D410
D411
L40
D405
RVDKV1225Y
SW1 VCO VARICAP
R457 1K
R409 4.7K
C414 0.01
C424 16V10
C431 0.01
SW1
C415 J1500P
D405
C425 J120P
D408
D409~412
MA150TA
AOC
R401 10K
C404 35V0.22
C407 0.01
R410 10K
C483
L403
R458 1K
C403 0.01
R402 10K
R411 4.7K
C416 0.01
C426 16V10
C432 0.01
408
SW1 +B LINE
LW +B LINE
GND
SW5+B

4UP


S1478
S1479
S1480
R1402
R1417
S1443
S1442
S1441
S1440
S1405-2
S1405-1
S1406-1
S1406-2
S1407
S1475
S1476
S1477
S1482
R1403
D1437
D1438
D1439
D1440
S1410-1
S1410-2
S1408-2
S1408-1
S1409
S1411-2
S1411-1
R1410
R1418
C1407
C1409
C1406
S1456
S1457
S1458
S1431
S1432
S1433
S1434
S1435
S1436
S1437
S1438
R1411
D1441
C1413
R1415
D1415
D1414
D1413
D1412
D1411
D1410
D1409
D1408
D1407
D1406
D1405
D1404
D1403
D1402

50. S1450: Touche de syntonisation automatique sur 3,3 MHz.
51. S1451: Touche de syntonisation automatique sur 3,5 MHz.
52. S1452: Touche de syntonisation automatique sur 4,0 MHz.
53. S1453: Touche de syntonisation automatique sur 4,9 MHz.
54. S1454: Touche de syntonisation automatique sur 6,1 MHz.
55. S1455: Touche de syntonisation automatique sur 7,1 MHz.
56. S1456: Touche de syntonisation automatique sur 9,6 MHz.
57. S1457: Touche de syntonisation automatique sur 11,8 MHz.
58. S1458: Touche de syntonisation automatique sur 14,2 MHz.
59. S1459: Commutateur de présélection de syntonisation du canal 1.
60. S1460: Commutateur de présélection de syntonisation du canal 2.
61. S1461: Commutateur de présélection de syntonisation du canal 3.
62. S1462: Commutateur de présélection de syntonisation du canal 4.
63. S1463: Commutateur de présélection de syntonisation du canal 5.
64. S1464: Commutateur de présélection de syntonisation du canal 6.
65. S1465: Commutateur de présélection de syntonisation du canal 7.
66. S1466: Commutateur de présélection de syntonisation du canal 8.
67. S1467: Commutateur de présélection de syntonisation du canal 9.
68. S1468: Commutateur de présélection de syntonisation du canal 10.
69. S1469: Commutateur de présélection de syntonisation du canal 11.
70. S1470: Commutateur de présélection de syntonisation du canal 12.
71. S1471: Commutateur de présélection de syntonisation du canal 13.
72. S1472: Commutateur de présélection de syntonisation du canal 14.
73. S1473: Commutateur de présélection de syntonisation du canal 15.
74. S1474: Touche de syntonisation directe 0.
75. S1475: Touche de syntonisation directe 1.
76. S1476: Touche de syntonisation directe 2.
77. S1477: Touche de syntonisation directe 3.
78. S1478: Touche de syntonisation directe 4.
79. S1479: Touche de syntonisation directe 5.
80. S1480: Touche de syntonisation directe 6.
81. S1481: Touche de syntonisation directe 7.
82. S1482: Touche de syntonisation directe 8.
83. S1483: Touche de syntonisation directe 9.
84. S1484: Touche de syntonisation directe ●.
85. S1485: Touche de fin de syntonisation directe.
86. S1486: Touche de début de syntonisation directe.
87. S1487: Interrupteur de réglage de l'horloge.
88. VR1401 . . . Contrôle de gain, VR1402 . . . Bass control, VR1403 . . . Treble control, VR1404 . . . Volume control.


C444 K33P
C445 K12P
403
C436 M0.001
L404
L406
L407
R429 120
44.125 MHz/48.125 MHz
IC401
RVIUPC1037H
MIX
C438 K68P
C451 J120P
C452 K68P
C437 K39P
SW2~4 +B LINE
SW2~5 +B LINE
C447 K22P
401
C448 0.01
IC401
L409
C468 0.01
R439 330
R440 3.3K
C461 0.01
L408
C440 K56P
C441 K47P
R432 56
C453 0.01
C455 0.01
402
T403
C464 M 0.001
C466 C1.5P
T404
C468 M0.001
R459 10
Q407
R441 100
C472 K33P
C473 M0.001
R448 10K
R450 470
Q409
L410
C475 0.01
C477 0.01
R454 56
Q408
R453 47
C476 0.01
405
404
R441 10K
R442 10K
R443 5.6K
R444 15K
C470 C1P
R446 47
R445 470
C471 0.01
T405
R449 4.7K
R451 22
R452 330
C474 0.01
R455 680
C465 K33P
C467 K33P
C469 M 0.0033
Q407,408,409
2SC1047
RF AMP
2.455 kHz
LW~SW1 +B LINE
R481 680
R434 220K
R427 1.8K
R428 1.8K
C434 6.3V47
C438 0.01
C449 0.01
C457 0.022
C462 6.3V47
Q405
R493 2.2K
C459 0.01
Q403
Q404
R426 330
R490 47K
406
407
C435 0.01
L405
C450 0.01
R437 220K
Q406
C460 0.01
R438 2.2K
C458 0.022
D412
C442 0.022
C443 0.022
MW +B LINE
Q409~412
150TA
AOC
Q403,404
2SA838
LW,MW,SW,VCO
Q405,406
2SC1359
BUFFER
SW2~4 46.58 MHz
SW5 45.67 MHz
GND
SW5+B
NC
SW2~4+B
GND
NC
GND
XO OUT
GND
SW2~5+B
GND
2.455MHz IN
GND
NC
GND
SW 2~5 2nd LOCAL OUT
GND
GND
RF VARICAP OPERATE SOURCE
NC
LW~SW1+B
GND
NC
GND
L/M/S1 VCO OUT
GND
GND
GND
LW~SW1 LOCAL OUT
GND
GND
LW+B
MW+B
SW1+B
VARICAP OPERATE IN
GND

electronics voltmeter from negative term
of battery.

▭ . . . SW2~SW5 position,
( ) . . . SW2~SW4 position,
〈 〉. . . SW5 position,
[ ] . . . LW, MW, SW1 position.

Bemerkungen:

1. Die Markierung (▼) bezeichnet ein Meßpunkt, z.B: ▼= Meßpunkt 1.
2. Alle Gleichspannungen sind mit eine Elektronikvoltmeter vom negativen Batteri anschluß aus zu messen.

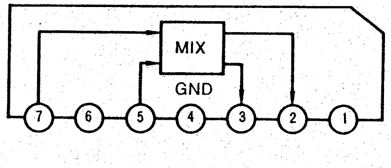
▭ . . . Stellung „KW2~KW5",
( ) . . . Stellung, „KW2~KW4",
〈 〉. . . Stellung „KW5",
[ ] . . . Stellung „LW, MW, KW 1".

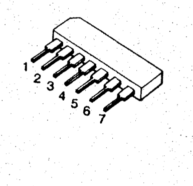
Remarques:

1. La marque (▼) signale un point vérification. EX.: ▼ =point de vérification 1
2. La tension c.c. est meaurée au moyen d' voltmétre électronique à partir de la bor négative de la pile.

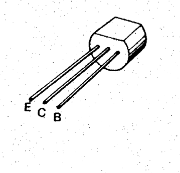
▭ . . .Position OC2~OC5,
( ) . . . Position OC2~OC4,
〈 〉. . . Position OC5,
[ ] . . . Position GO, PO, OC1.

IC401 RVIUPC1037H

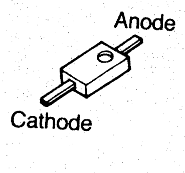

MIX
GND
7
6
5
4
3
2
1



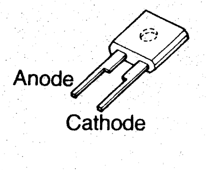
IC401



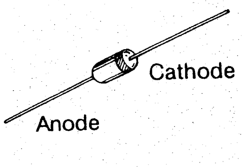
Q401~409


Anode
Cathode

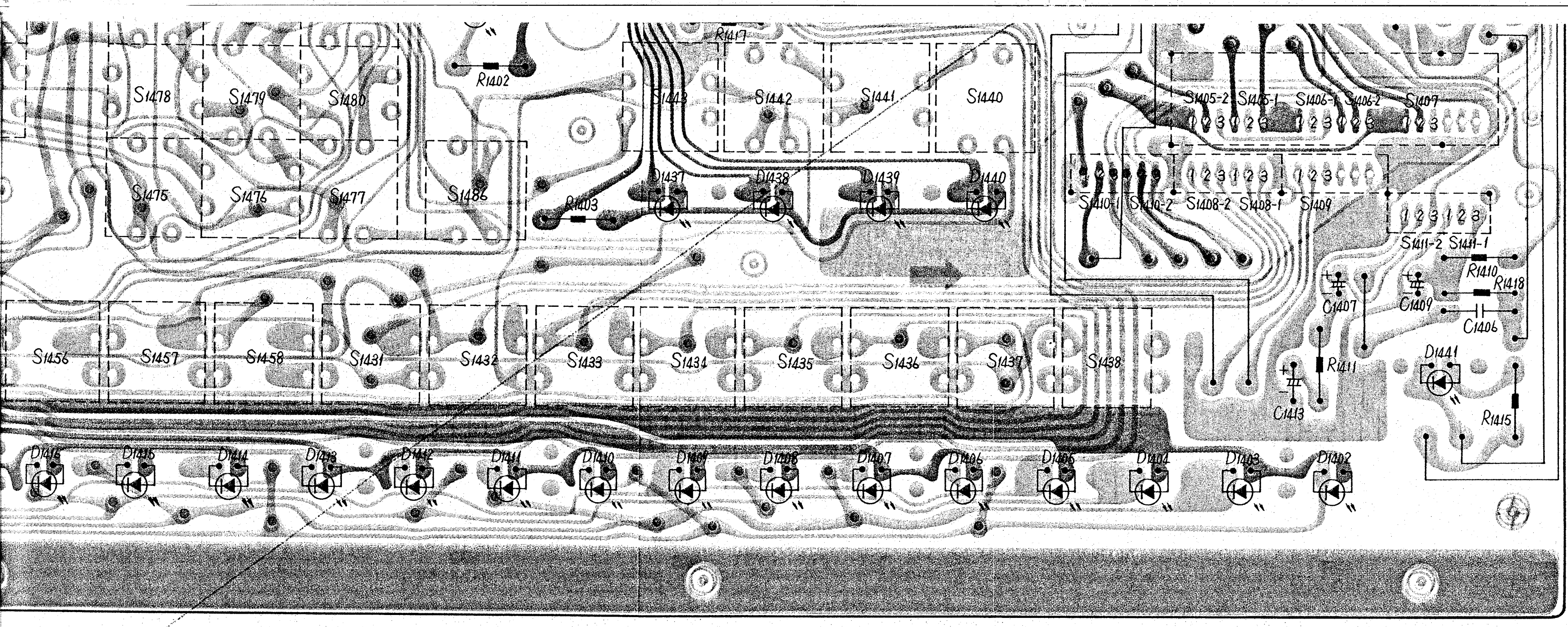
D401, 402, 406~408


Anode
Cathode

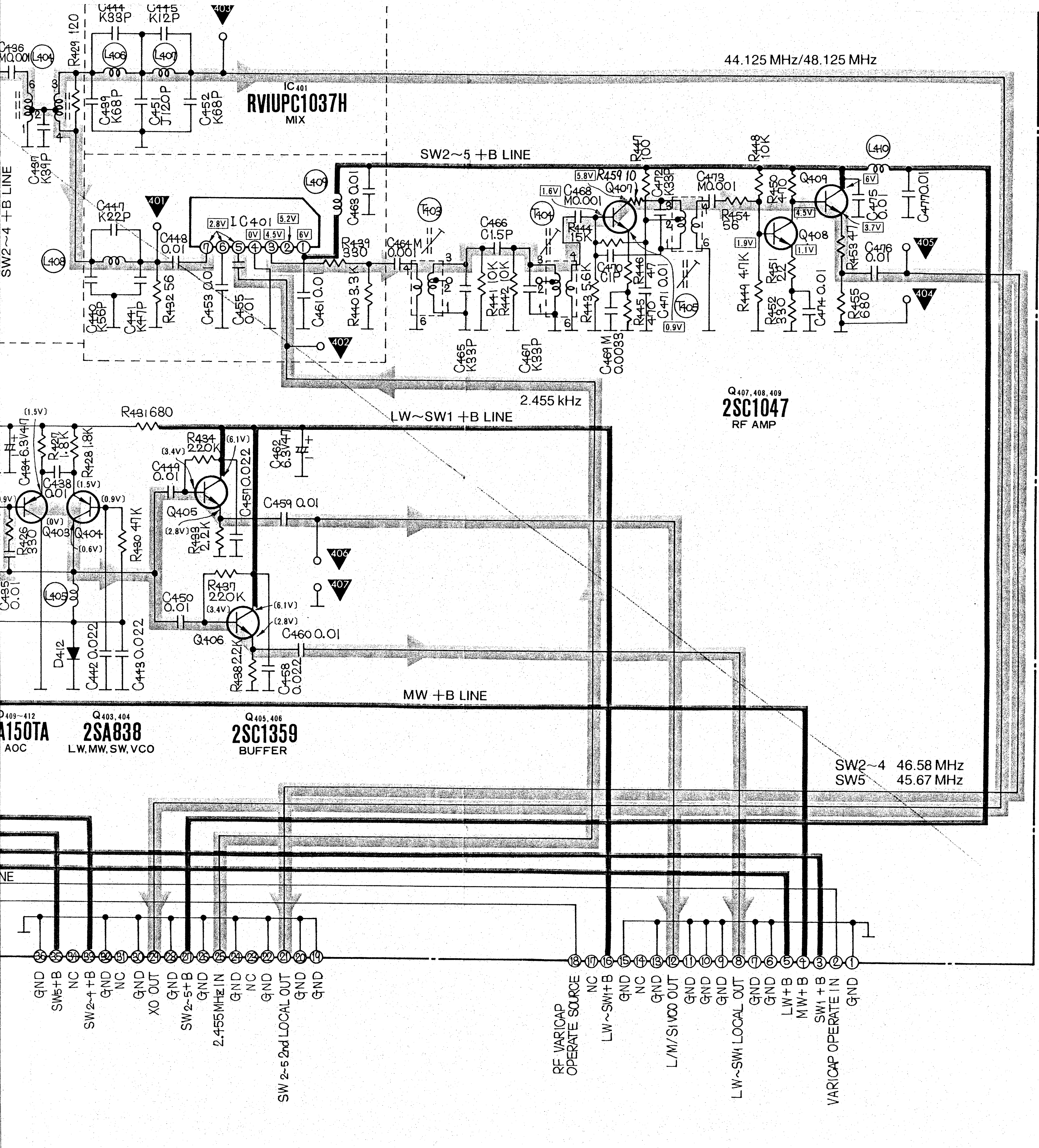
D403~405


Cathode
Anode

D409~412


S1478
S1479
S1480
R1402
R1417
S1443
S1442
S1441
S1440
S1475
S1476
S1477
S1482
R1403
D1437
D1438
D1439
D1440
S1405-2
S1405-1
S1406-1
S1406-2
S1407
S1410-1
S1410-2
S1408-2
S1408-1
S1409
S1411-2
S1411-1
R1410
R1418
C1407
C1409
C1406
S1456
S1457
S1458
S1431
S1432
S1433
S1434
S1435
S1436
S1437
S1438
R1411
D1441
C1413
R1415
D1415
D1413
D1414
D1412
D1411
D1410
D1409
D1408
D1407
D1406
D1405
D1404
D1403
D1402

50. S1450: Touche de syntonisation automatique sur 3,3 MHz.
51. S1451: Touche de syntonisation automatique sur 3,5 MHz.
52. S1452: Touche de syntonisation automatique sur 4,0 MHz.
53. S1453: Touche de syntonisation automatique sur 4,9 MHz.
54. S1454: Touche de syntonisation automatique sur 6,1 MHz.
55. S1455: Touche de syntonisation automatique sur 7,1 MHz.
56. S1456: Touche de syntonisation automatique sur 9,6 MHz.
57. S1457: Touche de syntonisation automatique sur 11,8 MHz.
58. S1458: Touche de syntonisation automatique sur 14,2 MHz.
59. S1459: Commutateur de présélection de syntonisation du canal 1.
60. S1460: Commutateur de présélection de syntonisation du canal 2.
61. S1461: Commutateur de présélection de syntonisation du canal 3.
62. S1462: Commutateur de présélection de syntonisation du canal 4.
63. S1463: Commutateur de présélection de syntonisation du canal 5.
64. S1464: Commutateur de présélection de syntonisation du canal 6.
65. S1465: Commutateur de présélection de syntonisation du canal 7.
66. S1466: Commutateur de présélection de syntonisation du canal 8.
67. S1467: Commutateur de présélection de syntonisation du canal 9.
68. S1468: Commutateur de présélection de syntonisation du canal 10.
69. S1469: Commutateur de présélection de syntonisation du canal 11.
70. S1470: Commutateur de présélection de syntonisation du canal 12.
71. S1471: Commutateur de présélection de syntonisation du canal 13.
72. S1472: Commutateur de présélection de syntonisation du canal 14.
73. S1473: Commutateur de présélection de syntonisation du canal 15.
74. S1474: Touche de syntonisation directe 0.
75. S1475: Touche de syntonisation directe 1.
76. S1476: Touche de syntonisation directe 2.
77. S1477: Touche de syntonisation directe 3.
78. S1478: Touche de syntonisation directe 4.
79. S1479: Touche de syntonisation directe 5.
80. S1480: Touche de syntonisation directe 6.
81. S1481: Touche de syntonisation directe 7.
82. S1482: Touche de syntonisation directe 8.
83. S1483: Touche de syntonisation directe 9.
84. S1484: Touche de syntonisation directe ●.
85. S1485: Touche de fin de syntonisation directe.
86. S1486: Touche de début de syntonisation directe.
87. S1487: Interrupteur de réglage de l'horloge.
88. VR1401 . . . Contrôle de gain, VR1402 . . . Bass control, VR1403 . . . Treble control, VR1404 . . . Volume control.


C444 K33P
C445 K12P
403
C436 M0.001
L404
R429 120
L406
L407
44.125 MHz/48.125 MHz
IC401
RVIUPC1037H
MIX
C439 K68P
C451 J120P
C452 K68P
C437 K39P
SW2~4 +B LINE
SW2~5 +B LINE
L409
C447 K22P
401
C448 0.01
IC401
C463 0.01
R439 330
R440 3.3K
C461 0.01
L408
C440 K56P
C441 K47P
R432 56
C453 0.01
C455 0.01
402
R441 100
R459 10
C468 M0.001
Q407
C412 K33P
C466 C1.5P
C464 M0.001
T403
T404
R441 10K
R442 10K
R444 15K
R443 5.6K
C470 C1P
R446 47
R445 470
C471 0.01
T405
C469 M 0.0033
C465 K33P
C467 K33P
C473 M0.001
R454 56
R448 10K
R450 470
Q409
Q408
R449 4.7K
R451 22
R452 330
C474 0.01
R453 47
C475 0.01
C476 0.01
C477 0.01
L410
R455 680
405
404
Q407, 408, 409
2SC1047
RF AMP
2.455 kHz
LW~SW1 +B LINE
R481 680
R434 220K
C462 6.3V47
C449 0.01
C438 0.01
R427 1.8K
R428 1.8K
Q405
C451 0.022
C459 0.01
Q403
Q404
R426 330
R433 2.2K
R430 47K
406
407
L405
C450 0.01
R437 220K
Q406
C460 0.01
R438 2.2K
C458 0.022
D412
C442 0.022
C443 0.022
C435 0.01
MW +B LINE
Q409~412
A150TA
AOC
Q403, 404
2SA838
LW, MW, SW, VCO
Q405, 406
2SC1359
BUFFER
SW2~4 46.58 MHz
SW5 45.67 MHz
GND
SW5+B
NC
SW2~4+B
GND
NC
GND
XO OUT
GND
SW2~5+B
GND
2.455MHz IN
GND
NC
GND
SW 2~5 2nd LOCAL OUT
GND
GND
RF VARICAP OPERATE SOURCE
NC
LW~SW1+B
GND
NC
GND
L/M/S1 VCO OUT
GND
GND
GND
LW~SW1 LOCAL OUT
GND
GND
LW+B
MW+B
SW1+B
VARICAP OPERATE IN
GND

electronics voltmeter from negative term
of battery.

▭ . . . SW2~SW5 position,
( ) . . . SW2~SW4 position,
〈 〉 . . . SW5 position,
[ ] . . . LW, MW, SW1 position.

Bemerkungen:

1. Die Markierung (▼) bezeichnet ein Meßpunkt, z.B: ▼ = Meßpunkt 1.
2. Alle Gleichspannungen sind mit eine Elektronikvoltmeter vom negativen Batteri anschluß aus zu messen.

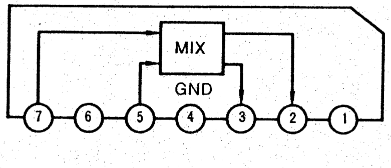
▭ . . . Stellung „KW2~KW5",
( ) . . . Stellung, „KW2~KW4",
〈 〉 . . . Stellung „KW5",
[ ] . . . Stellung „LW, MW, KW 1".

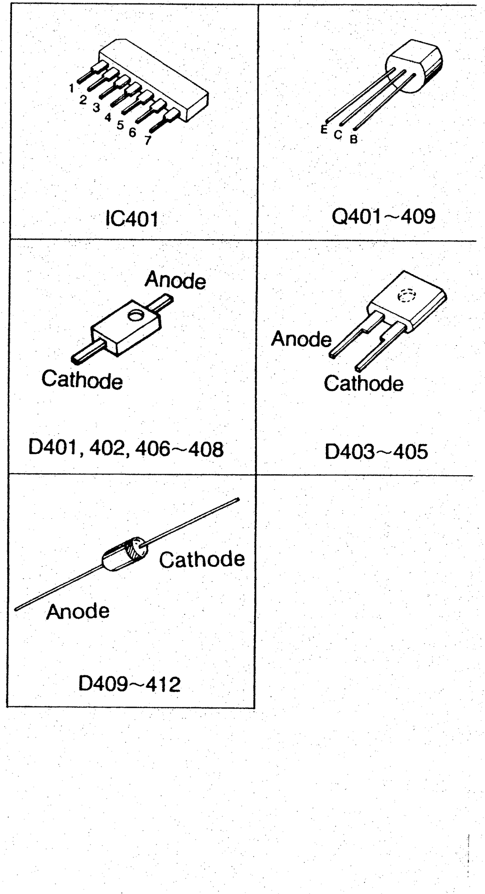
Remarques:

1. La marque (▼) signale un point vérification. EX.: ▼ =point de vérification 1
2. La tension c.c. est meaurée au moyen d' voltmétre électronique à partir de la bon négative de la pile.

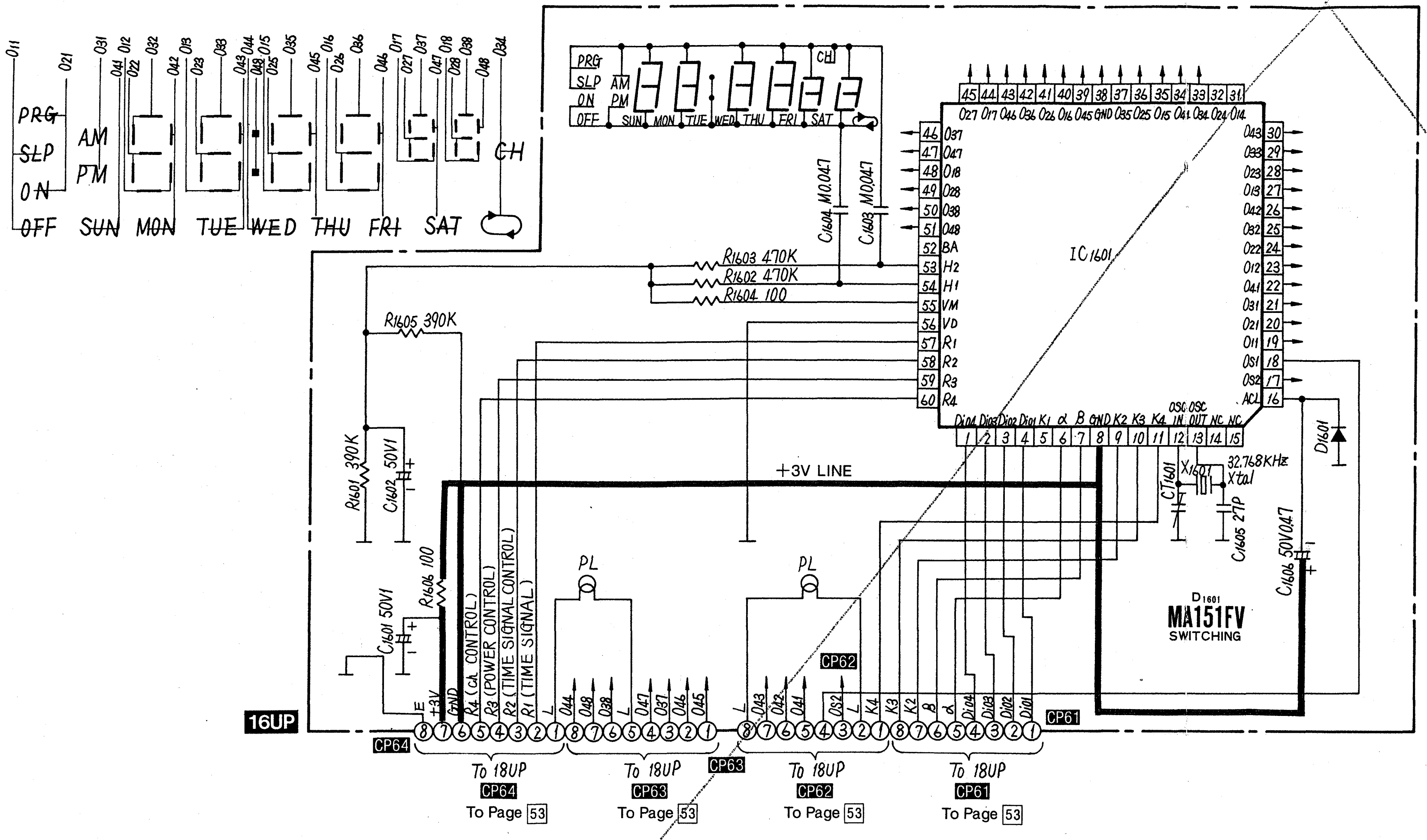
▭ . . .Position OC2~OC5,
( ) . . . Position OC2~OC4,
〈 〉 . . . Position OC5,
[ ] . . . Position GO, PO, OC1.

IC401 RVIUPC1037H

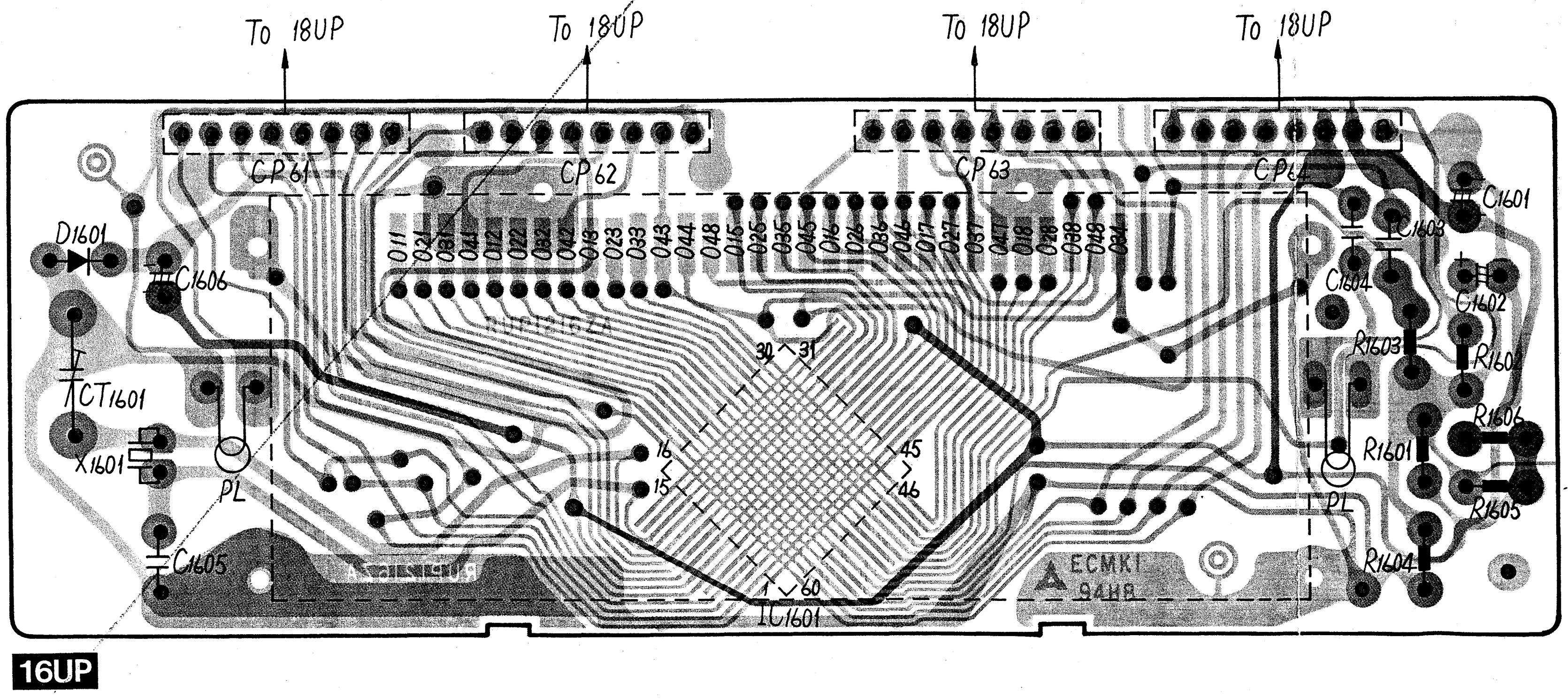

MIX
GND
7
6
5
4
3
2
1


1
2
3
4
5
6
7
IC401
E
C
B
Q401~409
Anode
Cathode
D401, 402, 406~408
Anode
Cathode
D403~405
Cathode
Anode
D409~412

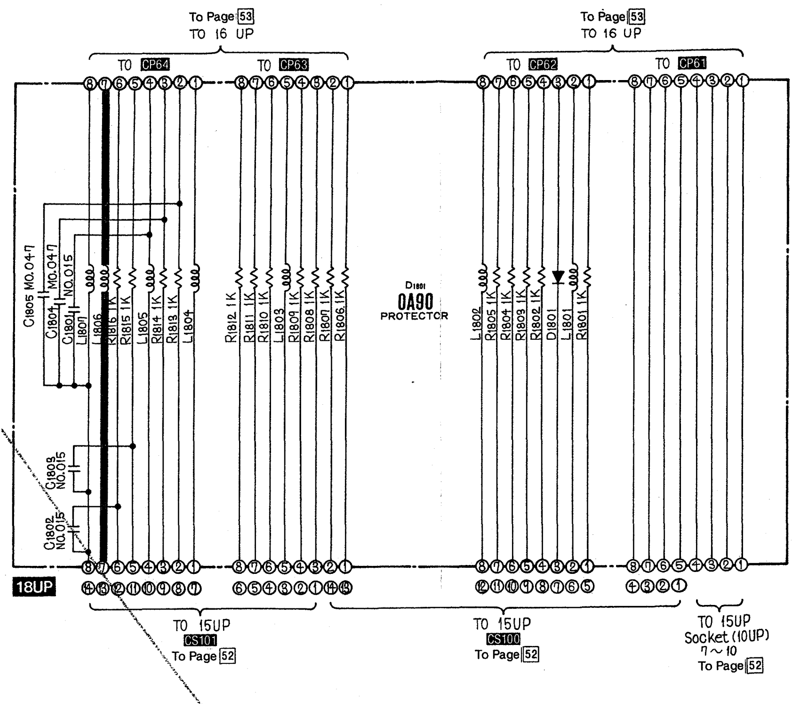
SCHEMATIC DIAGRAM (16 UP) . . . CLOCK CIRCUIT


PRG
SLP
ON
OFF
AM
PM
SUN MON TUE WED THU FRI SAT
CH
IC1601
R1603 470K
R1602 470K
R1604 100
R1605 390K
R1601 390K
C1602 50V1
R1606 100
C1601 50V1
C1604 M0.047
C1603 M0.047
CT1601
X1601
32.768KHz X'tal
C1605 27P
C1606 50V0.47
D1601
D1601
MA151FV
SWITCHING
+3V LINE
PL
PL
E +3V
GND
K4 (CA CONTROL)
R3 (POWER CONTROL)
R2 (TIME SIGNAL CONTROL)
R1 (TIME SIGNAL)
16UP
CP64
CP63
CP62
CP61
To 18UP
CP64
To Page 53
To 18UP
CP63
To Page 53
To 18UP
CP62
To Page 53
To 18UP
CP61
To Page 53

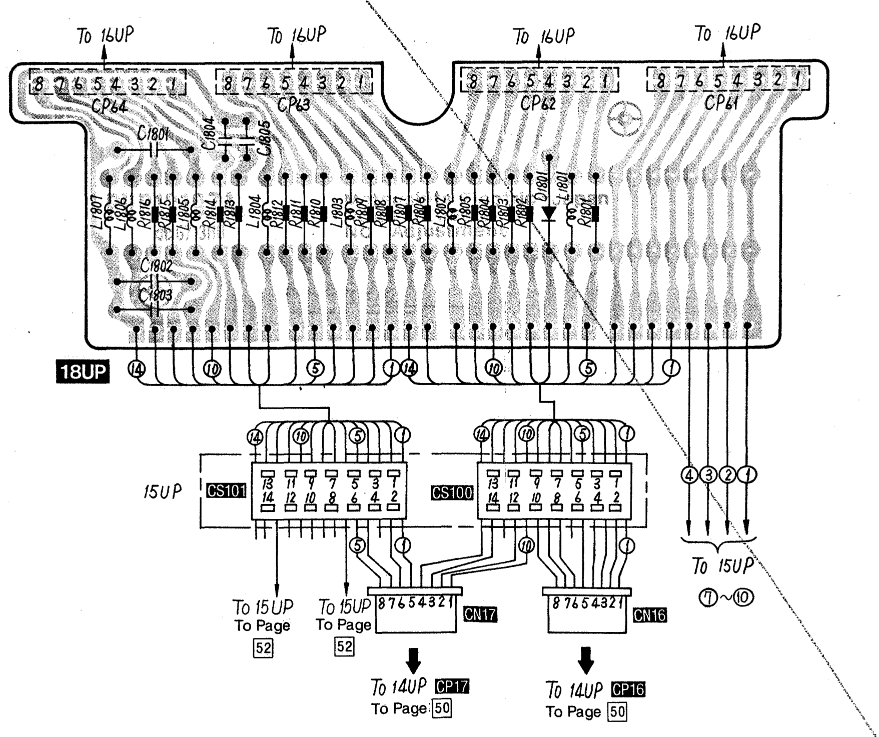
CIRCUIT BOARD WIRING VIEW (16 UP) . . . CLOCK CIRCUIT

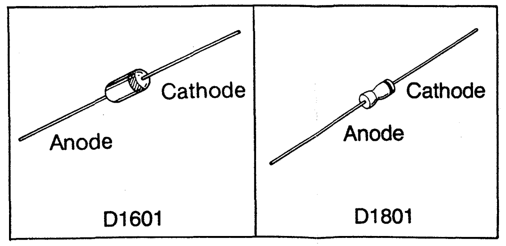

To 18UP
To 18UP
To 18UP
To 18UP
CP61
CP62
CP63
CP64
D1601
C1606
CT1601
X1601
PL
C1605
IC1601
30
31
16
15
45
46
1
60
C1601
C1603
C1604
C1602
R1603
R1602
R1606
R1601
R1605
R1604
PL
ECMKI
94HB
16UP

SCHEMATIC DIAGRAM (18 UP) . . . COMMON CIRCUIT


To Page 53
TO 16 UP
TO CP64
TO CP63
To Page 53
TO 16 UP
TO CP62
TO CP61
C1805 M0.047
C1804 M0.047
C1801 N0.015
C1803 N0.015
C1802 N0.015
D1801
OA90
PROTECTOR
18UP
TO 15UP
CS101
To Page 52
TO 15UP
CS100
To Page 52
TO 15UP
Socket (10UP)
7~10
To Page 52

CIRCUIT BOARD WIRING VIEW (18 UP) . . . COMMON CIRCUIT

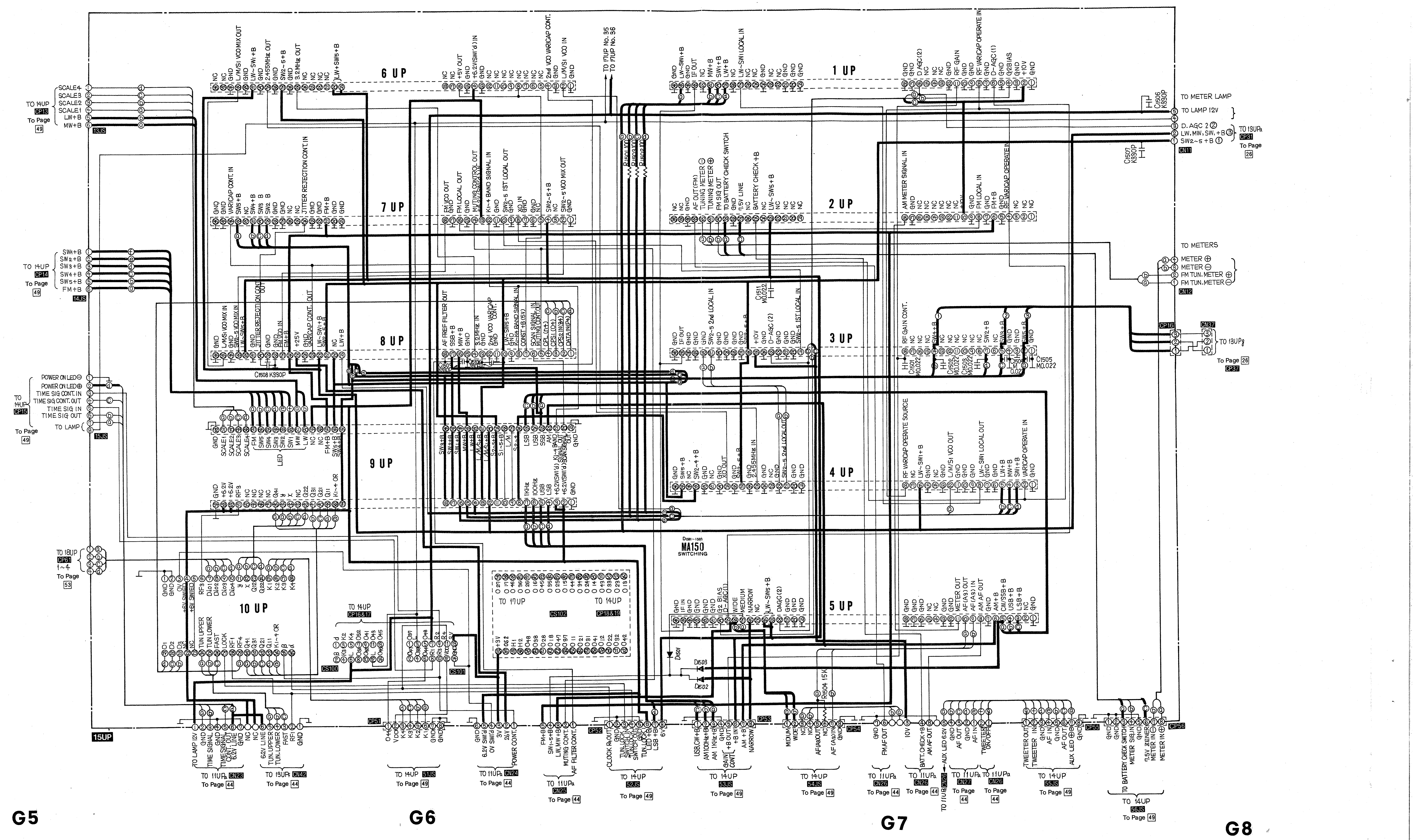

To 16UP
To 16UP
To 16UP
To 16UP
CP64
CP63
CP62
CP61
C1801
C1804
C1805
C1802
C1803
D1801
18UP
15UP
CS101
CS100
To 15UP
To Page 52
To 15UP
To Page 52
CN17
CN16
To 14UP CP17
To Page 50
To 14UP CP16
To Page 50
To 15UP
⑦~⑩


Cathode
Anode
D1601
Cathode
Anode
D1801

E5 E6 E7 E8

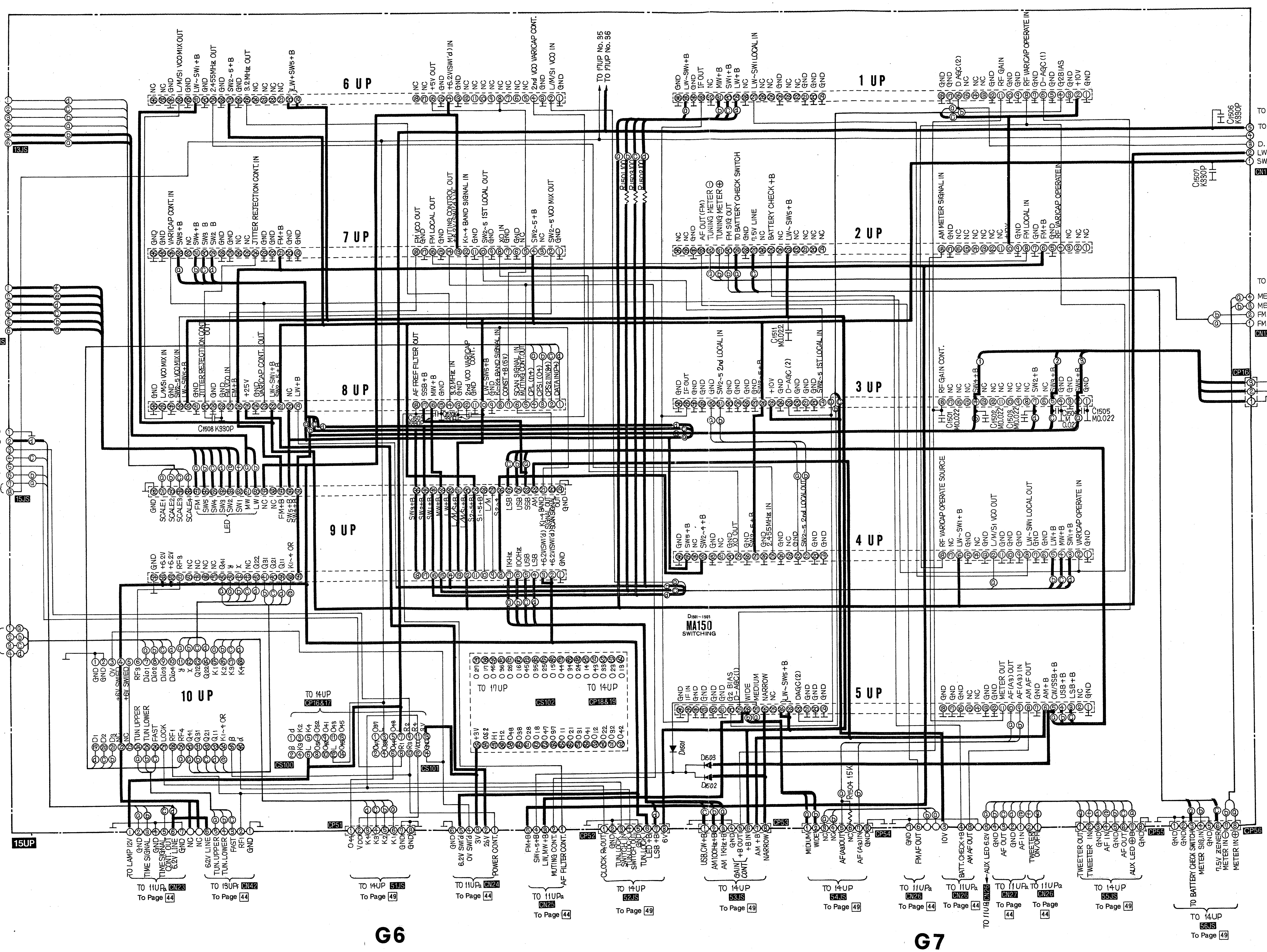
15 UP 15 UP

SCHEMATIC DIAGRAM (15 UP) . . . COMMON CIRCUIT



1 UP
2 UP
3 UP
4 UP
5 UP
6 UP
7 UP
8 UP
9 UP
10 UP
15UP
TO 14UP CP13 To Page 49
SCALE4
SCALE3
SCALE2
SCALE1
LW+B
MW+B
13JS
TO 14UP CP14 To Page 49
SW1+B
SW2+B
SW3+B
SW4+B
SW5+B
FM+B
14JS
TO 14UP CP15 To Page 49
POWER ON LED⊖
POWER ON LED⊕
TIME SIG CONT. IN
TIME SIG CONT. OUT
TIME SIG IN
TIME SIG OUT
TO LAMP
15JS
TO 18UP CP61 1~4 To Page 53
TO 17UP No. 35
TO 17UP No. 36
TO METER LAMP
TO LAMP 12V
D. AGC 2 ②
LW, MW, SW1+B ③
SW2~5+B ①
TO 13UPa CP31 To Page 26
CN11
C1506 K330P
C1507 K330P
TO METERS
METER ⊕
METER ⊖
FM TUN. METER ⊕
FM TUN. METER ⊖
CN12
CP16
CN37
TO 13UPg To Page 26 CP37
C1608 K330P
C1511 M0.022
C1501 M0.022
C1502 M0.022
C1503 M0.022
C1504 0.02
C1505 M0.022
R1501 10K
R1502 10K
R1503 10K
D1501~1501 MA150 SWITCHING
D1501
D1502
D1503
R1504 15K
TO 14UP CP16&17
CS100
CS101
TO 17UP
TO 14UP
CS102
CP18&19
AM METER SIGNAL IN
RF GAIN CONT.
RF VARICAP OPERATE SOURCE
VARICAP CONT. IN
JITTER REJECTION CONT. IN
FM VCO OUT
FM LOCAL OUT
MUTING CONTROL OUT
K1~4 BAND SIGNAL IN
SW2~5 1ST LOCAL OUT
2nd VCO VARICAP CONT.
L/M/S1 VCO IN
SW2~5 VCO MIX OUT
L/M/S1 VCO MIX OUT
2.455MHz OUT
3.2MHz OUT
LW+SW5+B
AF OUT (FM)
TUNING METER ⊖
TUNING METER ⊕
FM SIG OUT
TO BATTERY CHECK SWITCH
BATTERY CHECK +B
LW~SW1 LOCAL IN
D. AGC (2)
D-AGC (1)
Q2 BIAS
RF VARICAP OPERATE IN
AF REF FILTER OUT
SCAN SIGNAL IN
MUTING CONT. OUT
CONST +B (5V)
CPS1 (O4)
CPS2 IN (O4)
DATA IN (P4)
SW2~5 2nd LOCAL IN
SW2~5 1ST LOCAL IN
LW~SW1 VCO OUT
LW~SW1 LOCAL OUT
VARICAP OPERATE IN
K1~4 OR
METER OUT
AF (A3) OUT
AM AF OUT
CW/SSB+B
USB+B
LSB+B
WIDE
MEDIUM
NARROW
DAGC (2)
TO LAMP 12V
TIME SIGNAL
TIME SIGNAL CONT. OUT
6.2V LINE
TUN. UPPER
TUN. LOWER
FAST
TO 11UPa CN23 To Page 44
TO 15UPf CN42 To Page 44
CP51
TO 14UP 51JS To Page 49
6.2V SWI'd
0V SWI'd
3V
26V
POWER CONT.
TO 11UPa CN24 To Page 44
LW, MW+B
MUTING CONT.
AF FILTER CONT.
TO 11UPa CN25 To Page 44
CP52
CLOCK IN/OUT
TUN. LOCK
TO 14UP 52JS To Page 49
USB, CW+B
AM 100Hz+B
AM 1KHz+B
GAIN CONT.
AM+B
TO 14UP 53JS To Page 49
CP53
CP54
FM AF OUT
TO 14UP 54JS To Page 49
TO 11UPa CN26 To Page 44
10V
BATT. CHECK +B
AM AF OUT
AUX LED 6.2V
AF IN
TWEETER ON/OFF
TO 11UPa CN27 To Page 44
TO 11UPa CN26 To Page 44
TWEETER OUT
TWEETER IN
AUX LED ⊕
TO 14UP 55JS To Page 49
CP55
TO BATTERY CHECK SWITCH
METER SIG. IN
11.5V ZENER
METER IN⊖
METER IN⊕
TO 14UP 56JS To Page 49
CP56
G5
G6
G7
G8

SCHEMATIC DIAGRAM (15 UP) . . . COMMON CIRCUIT



6 UP
7 UP
8 UP
9 UP
10 UP
1 UP
2 UP
3 UP
4 UP
5 UP
15UP
13JS
14JS
15JS
TO 14UP CP13 To Page 49
SCALE4
SCALE3
SCALE2
SCALE1
LW+B
MW+B
TO 14UP CP14 To Page 49
SW1+B
SW2+B
SW3+B
SW4+B
SW5+B
FM+B
POWER ON LED⊖
POWER ON LED⊕
TIME SIG CONT. IN
TIME SIG CONT. OUT
TIME SIG IN
TIME SIG OUT
TO LAMP
TO 14UP CP15 To Page 49
TO 18UP CP61 1~4 To Page 53
TO 17UP No. 35
TO 17UP No. 36
R1501 10K
R1502 10K
R1503 10K
C1506 K330P
TO METER LAMP
TO LAMP 12V
D. AGC 2 ②
LW. MW. SW. +B ③
SW2~5 +B ①
TO 13UPa CP31 To Page 26
CN11
C1507 K330P
TO METERS
METER ⊕
METER ⊖
FM TUN. METER ⊕
FM TUN. METER ⊖
CN12
CP16
CN37
TO 13UPβ
To Page 26
CP37
C1508 K330P
C1511 M0.022
C1501 M0.022
C1502 M0.022
C1503 M0.022
C1504 0.02
C1505 M0.022
D1501~1501 MA150 SWITCHING
D1501
D1503
D1502
R1504 15K
TO 14UP CP16&17
CS100
CS101
TO 17UP
CS102
TO 14UP
CP18&19
CP51
CP52
CP53
CP54
CP55
CP56
TO 11UPa CN23 To Page 44
TO 13UPi CN42 To Page 44
TO 14UP 51JS To Page 49
TO 11UPa CN24 To Page 44
TO 11UPa CN25 To Page 44
TO 14UP 52JS To Page 49
TO 14UP 53JS To Page 49
TO 14UP 54JS To Page 49
TO 11UPa CN26 To Page 44
TO 11UPa CN26 To Page 44
TO 11UPa CN27 To Page 44
TO 11UPa CN26 To Page 44
TO 14UP 55JS To Page 49
TO 14UP 56JS To Page 49
TO BATTERY CHECK SWITCH
METER SIG IN
11.5V ZENER
METER IN ⊖
METER IN ⊕

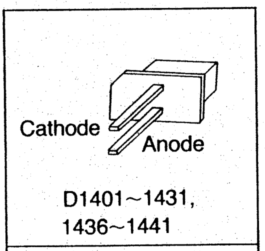
SCH

Notes:

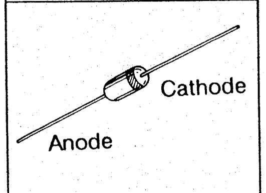
1. S1401: Light switch in "OFF" position.
2. S1402-1, S1402-2: Time signal switch.
3. S1403-1, S1403-2: Program selector switch in "Manual" position.
4. S1404-1, S1404-2: Tuning lock switch.
5. S1405-1, S1405-2: AM band width narrow switch.
6. S1406-1, S1406-2: AM band width MED switch.
7. S1407: AM band width wide switch.
8. S1408-1, S1408-2: ANL switch.
9. S1409: Tweeter switch.
10. S1410-1, S1410-2: Signal/Battery switch in "Battery" position.
11. S1411-1, 1411-2: Loudness switch.
12. S1412: HR./MO. up switch.
13. S1413: HR./MO. down switch.
14. S1414: MIN./DATE up switch.
15. S1415: MIN./DATE down switch.
16. S1416: Channel up switch.
17. S1417: Channel down switch.
18. S1418: 12/24 HR. switch.
19. S1419: Sleep switch.
20. S1420: Power switch.
21. S1421: Day reciprocal switch.
22. S1422: Day up switch.
23. S1423: Day Memory switch.
24. S1424: Program review switch.
25. S1425: ON/OFF time switch.
26. S1426: Program CLR switch.
27. S1427: Time display switch.
28. S1428: Dual time switch.
29. S1429: MO./DATE display switch.
30. S1430: One time switch.
31. S1431: Direct touch tuning 15.3 MHz switch.
32. S1432: Direct touch tuning 17.8 MHz switch.
33. S1433: Direct touch tuning 21.2 MHz switch.
34. S1434: Direct touch tuning 21.6 MHz switch.
35. S1435: Direct touch tuning 25.9 MHz switch.
36. S1436: Direct touch tuning 28.5 MHz switch.
37. S1437: Direct touch tuning 95 MHz switch.
38. S1438: Direct touch tuning 101 MHz switch.
39. S1439: Scan/Stop switch.
40. S1440: Frequency step AM 1/5 kHz switch.
41. S1441: Frequency step AM 100/500 Hz switch.
42. S1442: Frequency step USB/CW 100/500 Hz switch.
43. S1143: Frequency step LSB/CW 100/500 Hz switch.
44. S1444: Memory switch.
45. S1445: Direct touch tuning 0.2 MHz switch.
46. S1446: Direct touch tuning 0.8 MHz switch.
47. S1447: Direct touch tuning 1.3 MHz switch.
48. S1448: Direct touch tuning 1.9 MHz switch.
49. S1449: Direct touch tuning 2.4 MHz switch.
50. S1450: Direct touch tuning 3.3 MHz switch.
51. S1451: Direct touch tuning 3.5 MHz switch.
52. S1452: Direct touch tuning 4.0 MHz switch.
53. S1453: Direct touch tuning 4.9 MHz switch.
54. S1454: Direct touch tuning 6.1 MHz switch.
55. S1455: Direct touch tuning 7.1 MHz switch.
56. S1456: Direct touch tuning 9.6 MHz switch.
57. S1457: Direct touch tuning 11.8 MHz switch.
58. S1458: Direct touch tuning 14.2 MHz switch.
59. S1459: Preset tuning CH1 switch.
60. S1460: Preset tuning CH2 switch.
61. S1461: Preset tuning CH3 switch.
62. S1462: Preset tuning CH4 switch.
63. S1463: Preset tuning CH5 switch.
64. S1464: Preset tuning CH6 switch.
65. S1465: Preset tuning CH7 switch.
66. S1466: Preset tuning CH8 switch.
67. S1467: Preset tuning CH9 switch.
68. S1468: Preset tuning CH10 switch.
69. S1469: Preset tuning CH11 switch.
70. S1470: Preset tuning CH12 switch.
71. S1471: Preset tuning CH13 switch.
72. S1472: Preset tuning CH14 switch.
73. S1473: Preset tuning CH15 switch.
74. S1474: Direct-Access tuning 0 switch.
75. S1475: Direct-Access tuning 1 switch.
76. S1476: Direct-Access tuning 2 switch.
77. S1477: Direct-Access tuning 3 switch.
78. S1478: Direct-Access tuning 4 switch.
79. S1479: Direct-Access tuning 5 switch.
80. S1480: Direct-Access tuning 6 switch.
81. S1481: Direct-Access tuning 7 switch.
82. S1482: Direct-Access tuning 8 switch.
83. S1483: Direct-Access tuning 9 switch.
84. S1484: Direct-Access tuning ● switch.
85. S1485: Direct-Access tuning SET switch.
86. S1486: Direct-Access tuning Frequency switch.
87. S1487: Clock adjust switch.
88. VR1401 . . . Gain control, VR1402 . . . Bass control, VR1403 . . . Treble control, VR1404 . . . Volume control.

Bemerkungen:

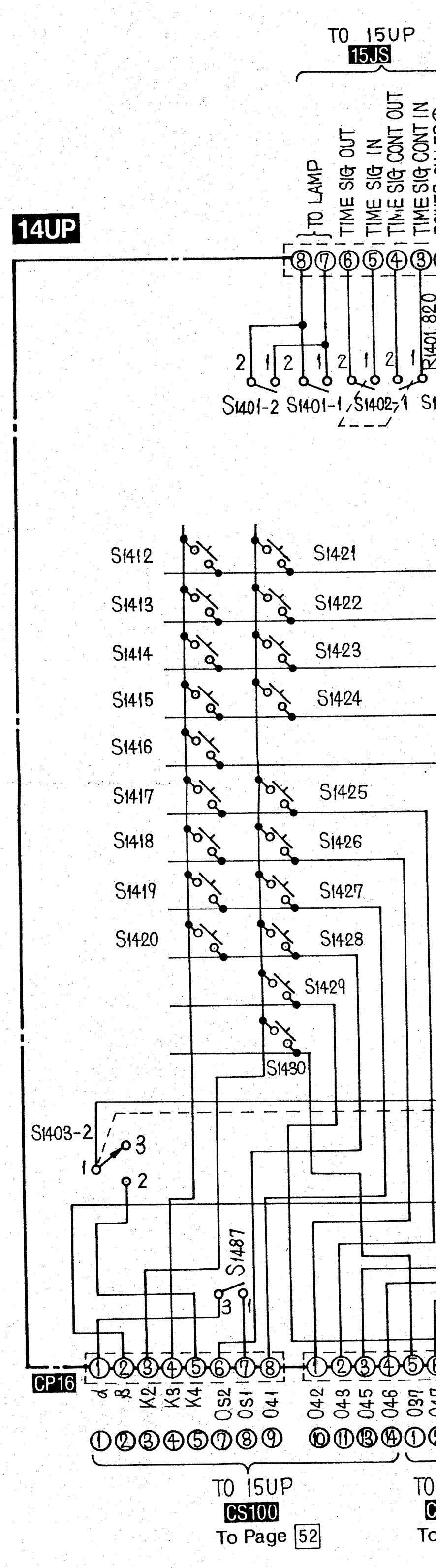
1. S1401: Lichtschalter auf „AUS".
2. S1402-1, S1402-2: Zeitsignal-Schalter.
3. S1403-1, S1403-2: Betriebsartenschalter auf „manuell".
4. S1404-1, S1404-2: Scharfabstimmschalter.
5. S1405-1, S1405-2: AM-Bandbreitenschalter NARROW.
6. S1406-1, S1406-2: AM-Bandbreitenschalter MED.
7. S1407: AM-Bandbreitenschalter WIDE.
8. S1408-1, S1408-2: Geräuschunterdrückungsschalter.
9. S1409: Hochtönerschalter.
10. S1410-1, S1410-2: Signalstärke-/Batteriekontrollscalter auf „Batteriekontrolle".
11. S1411-1, S1411-2: Frequenzgangkorrekturschalter.
12. S1412: Stunden/Monat-Taste UP.
13. S1413: Stunden/Monat-Taste DOWN.
14. S1414: Minuten/Datum-Taste UP.
15. S1415: Minuten/Datum-Taste DOWN.
16. S1416: Stationsnummer-Taste UP.
17. S1417: Stationsnummer-Taste DOWN.
18. S1418: 12/24-Stundenzyklus-Schalter.
19. S1419: Abschaltautomatik-Schalter („Sleep").
20. S1420: Netzschalter.
21. S1421: Tagesumkehrschalter.
22. S1422: Wochentag-Taste UP.
23. S1423: Tagsprogrammierschalter.
24. S1424: Programmkontrollschalter.
25. S1425: Beginnzeit/Endzeit-Umschalter.
26. S1426: Löschtaste.
27. S1427: Zeitanzeigenschalter.
28. S1428: Zeitzonen-Umschalter.
29. S1429: Monat/Datum-Anzeigenschalter.
30. S1430: Schalter für einmalige Programmausführung.
31. S1431: Frequenzbandschalter 15,3 MHz.
32. S1432: Frequenzbandschalter 17,8 MHz.
33. S1433: Frequenzbandschalter 21,2 MHz.
34. S1434: Frequenzbandschalter 21,6 MHz.
35. S1435: Frequenzbandschalter 25,9 MHz.
36. S1436: Frequenzbandschalter 28,5 MHz.
37. S1437: Frequenzbandschalter 95 MHz.
38. S1438: Frequenzbandschalter 101 MHz.
39. S1439: Senderabfragetaste.
40. S1440: AM-Frequenzintervallschalter 1/5 kHz.
41. S1441: AM-Frequenzintervallschalter 100/500 Hz.
42. S1442: USB/CW-Frequenzintervallschalter 100/500 Hz.
43. S1443: LSB/CW-Frequenzintervallschalter 100/500 Hz.
44. S1444: Speichertaste.
45. S1445: Frequenzbandschalter 0,2 MHz.
46. S1446: Frequenzbandschalter 0,8 MHz.
47. S1447: Frequenzbandschalter 1,3 MHz.
48. S1448: Frequenzbandschalter 1,9 MHz.
49. S1449: Frequenzbandschalter 2,4 MHz.
50. S1450: Frequenzbandschalter 3,3 MHz.
51. S1451: Frequenzbandschalter 3,5 MHz.
52. S1452: Frequenzbandschalter 4,0 MHz.
53. S1453: Frequenzbandschalter 4,9 MHz.
54. S1454: Frequenzbandschalter 6,1 MHz.
55. S1455: Frequenzbandschalter 7,1 MHz.
56. S1456: Frequenzbandschalter 9,6 MHz.
57. S1457: Frequenzbandschalter 11,8 MHz.
58. S1458: Frequenzbandschalter 14,2 MHz.
59. S1459: Festsendertaste CH1.
60. S1460: Festsendertaste CH2.
61. S1461: Festsendertaste CH3.
62. S1462: Festsendertaste CH4.
63. S1463: Festsendertaste CH5.
64. S1464: Festsendertaste CH6.
65. S1465: Festsendertaste CH7.
66. S1466: Festsendertaste CH8.
67. S1467: Festsendertaste CH9.
68. S1468: Festsendertaste CH10.
69. S1469: Festsendertaste CH11.
70. S1470: Festsendertaste CH12.
71. S1471: Festsendertaste CH13.
72. S1472: Festsendertaste CH14.
73. S1473: Festsendertaste CH15.
74. S1474: Frequenz-Direktwahltaste 0
75. S1475: Frequenz-Direktwahltaste 1
76. S1476: Frequenz-Direktwahltaste 2
77. S1477: Frequenz-Direktwahltaste 3
78. S1478: Frequenz-Direktwahltaste 4
79. S1479: Frequenz-Direktwahltaste 5
80. S1480: Frequenz-Direktwahltaste 6
81. S1481: Frequenz-Direktwahltaste 7
82. S1482: Frequenz-Direktwahltaste 8
83. S1483: Frequenz-Direktwahltaste 9
84. S1484: Frequenz-Direktwahltaste ●
85. S1485: Frequenz-Direktwahltaste SET.
86. S1486: Frequenz-Direkwahltaste FREQUENCY.
87. S1487: Uhrzeit-Einstellschalter.
88. VR1401 . . . Verstärkungsregler, VR1402 . . . Bass control. VR1403 . . . Treble control, VR1404 . . . Volume control.



D1401~1431, 1436~1441

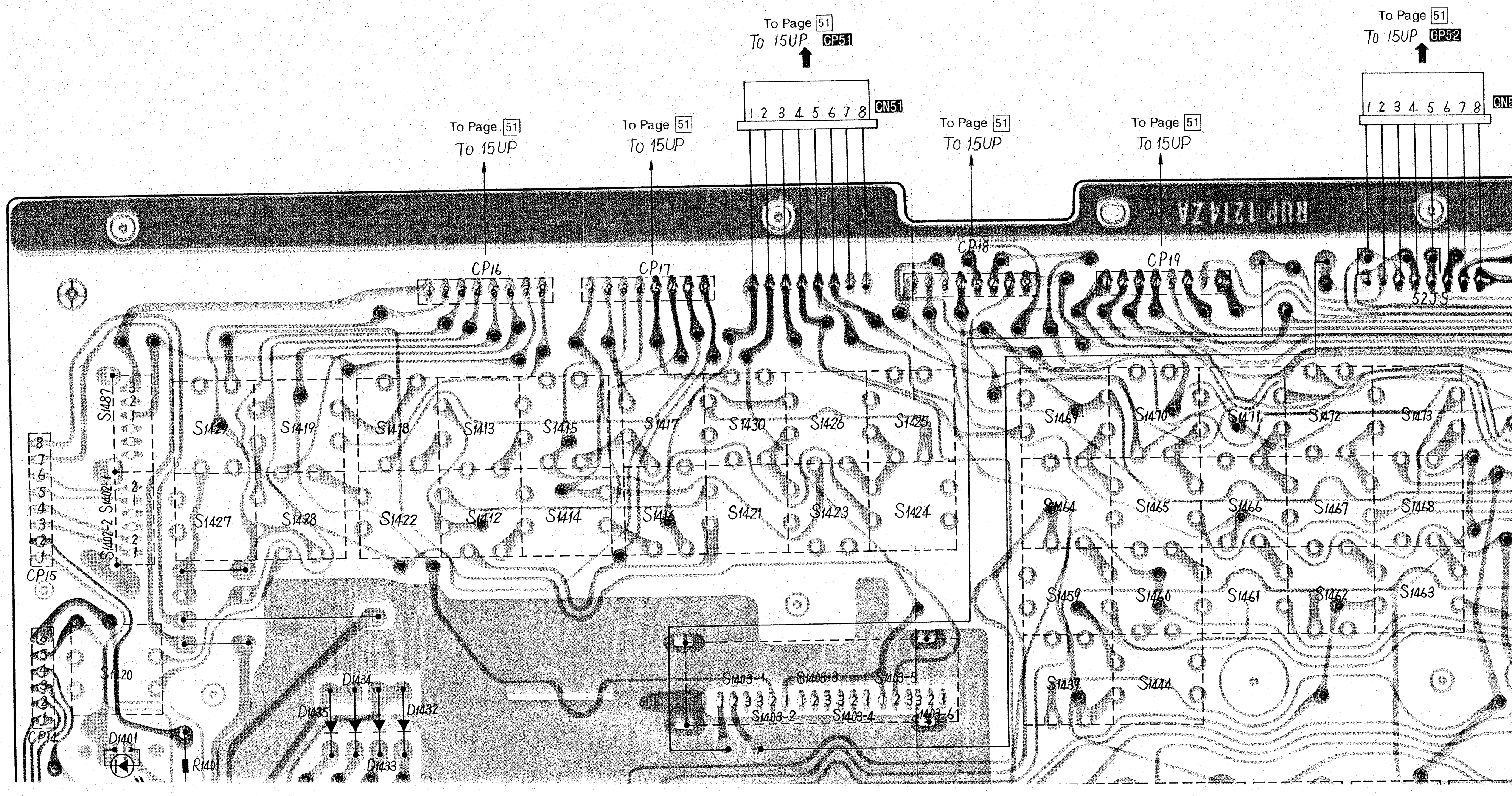


D1432~1435, 1442

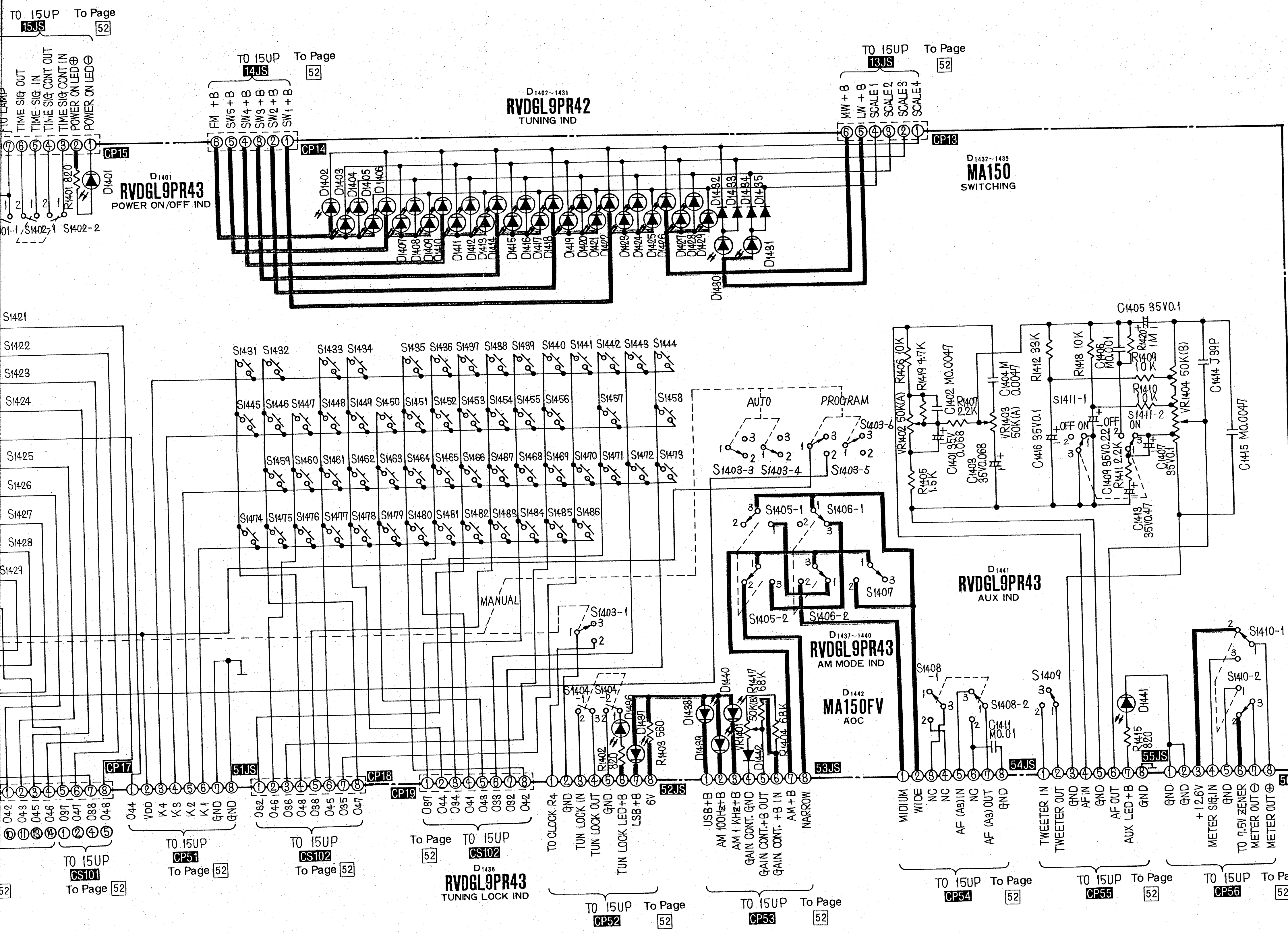


14 UP **14 UP**

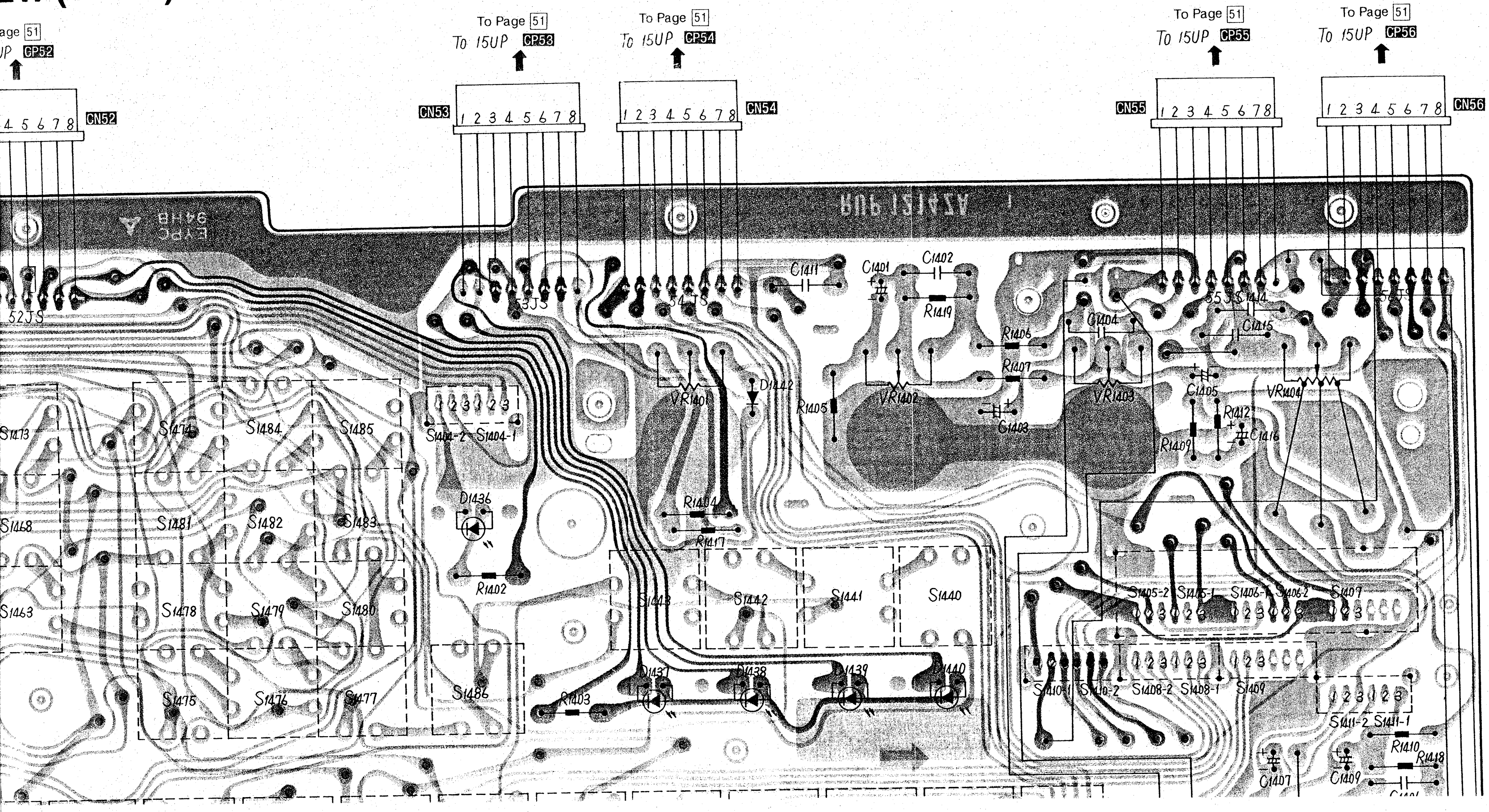
CIRCUIT BOARD WIRING VIEW (14



SCHEMATIC DIAGRAM (14 UP) . . . KEY BOARD CIRCUIT

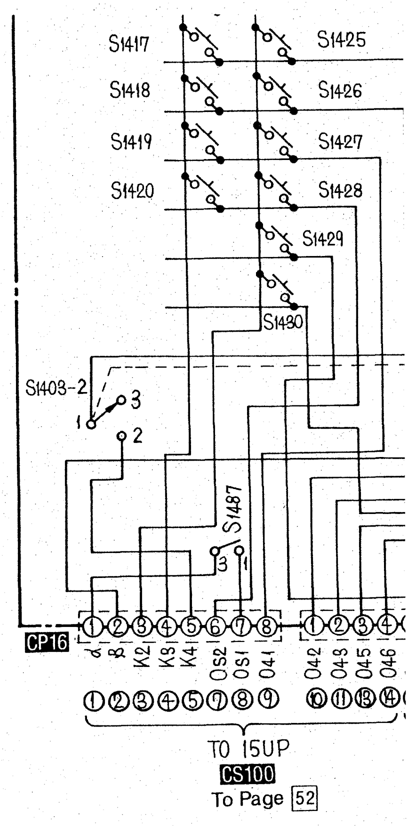

TO 15UP 15JS To Page 52
TO LAMP
TIME SIG OUT
TIME SIG IN
TIME SIG CONT OUT
TIME SIG CONT IN
POWER ON LED⊕
POWER ON LED⊖
CP15
D1401 RVDGL9PR43 POWER ON/OFF IND
R1401 820
S1401-1 S1402-1 S1402-2
TO 15UP 14JS To Page 52
FM +B
SW5 +B
SW4 +B
SW3 +B
SW2 +B
SW1 +B
CP14
D1402~1431 RVDGL9PR42 TUNING IND
TO 15UP 13JS To Page 52
MW + B
LW + B
SCALE 1
SCALE 2
SCALE 3
SCALE 4
CP13
D1432~1435 MA150 SWITCHING
S1431 S1432 S1433 S1434 S1435 S1436 S1437 S1438 S1439 S1440 S1441 S1442 S1443 S1444
S1445 S1446 S1447 S1448 S1449 S1450 S1451 S1452 S1453 S1454 S1455 S1456 S1457 S1458
S1459 S1460 S1461 S1462 S1463 S1464 S1465 S1466 S1467 S1468 S1469 S1470 S1471 S1472 S1473
S1474 S1475 S1476 S1477 S1478 S1479 S1480 S1481 S1482 S1483 S1484 S1485 S1486
S1421 S1422 S1423 S1424 S1425 S1426 S1427 S1428 S1429
AUTO
PROGRAM
S1403-3 S1403-4 S1403-5 S1403-6
MANUAL
S1403-1
S1404-1 S1404-2
S1405-1 S1406-1 S1405-2 S1406-2 S1407
D1437~1440 RVDGL9PR43 AM MODE IND
D1442 MA150FV AOC
D1441 RVDGL9PR43 AUX IND
C1405 35V0.1
VR1402 50K(A)
R1406 10K
R1419 4.7K
C1402 M0.0047
R1407 2.2K
C1401 35V 0.068
C1403 35V0.068
R1405 1.5K
VR1403 50K(A)
C1404 M 0.0047
R1412 33K
C1416 35V0.1
R1418 10K
C1406 M0.001
R1420 1M
R1409 10K
R1410 10K
S1411-1 S1411-2
OFF ON
C1409 35V0.22
R1411 2.2K
C1407 35V0.1
C1418 35V0.47
VR1404 50K(B)
C1414 J39P
C1415 M0.0047
S1408-1 S1408-2 S1409
C1411 M0.01
S1410-1 S1410-2
D1441
R1415 820
R1402 820
D1436 D1437
R1403 560
6V
R1417 68K
VR1401 50K(B)
R1404 6.8K
CP17 51JS CP18 CP19 52JS 53JS 54JS 55JS
O42 O43 O45 O46 O37 O47 O38 O48
TO 15UP CS101 To Page 52
O44 VDD K4 K3 K2 K1 GND GND
TO 15UP CP51 To Page 52
O32 O46 O36 O48 O38 O45 O35 O47
TO 15UP CS102 To Page 52
O37 O44 O34 O41 O43 O33 O32 O42
To Page 52 TO 15UP CS102
D1436 RVDGL9PR43 TUNING LOCK IND
TO CLOCK R4
GND
TUN LOCK IN
TUN LOCK OUT
GND
TUN LOCK LED+B
LSB +B
TO 15UP CP52 To Page 52
USB+B
AM 100Hz+B
AM 1 KHz+B
GAIN CONT. GND
GAIN CONT.+B OUT
GAIN CONT. +B IN
AM+B
NARROW
TO 15UP CP53 To Page 52
MIDIUM
WIDE
NC
NC
AF (A3) IN
NC
AF (A3) OUT
GND
TO 15UP CP54 To Page 52
TWEETER IN
TWEETER OUT
GND
AF IN
GND
AF OUT
AUX LED +B
GND
TO 15UP CP55 To Page 52
GND
GND
+12.6V
METER SIG.IN
GND
TO 11.5V ZENER
METER OUT⊕
METER OUT⊖
TO 15UP CP56 To Page 52

EW (14 UP) . . . KEY BOARD CIRCUIT


To Page 51 To 15UP CP52
To Page 51 To 15UP CP53
To Page 51 To 15UP CP54
To Page 51 To 15UP CP55
To Page 51 To 15UP CP56
CN52 CN53 CN54 CN55 CN56
1 2 3 4 5 6 7 8
AZ1414 PUR
EYPC 9418
52JS 53JS 54JS 55JS
C1411 C1401 C1402 R1419 R1406 R1407 C1404 C1415
VR1401 D1442 R1405 VR1402 VR1403 C1403 C1405 VR1404 R1412 C1416 R1409
S1473 S1474 S1484 S1485 S1404-2 S1404-1
S1468 S1481 S1482 S1483 D1436 R1404 R1417 R1402
S1463 S1478 S1479 S1480 S1443 S1442 S1441 S1440
S1405-2 S1405-1 S1406-1 S1406-2 S1407
S1475 S1476 S1477 S1486 R1403 D1437 D1438 D1439 D1440
S1410-1 S1410-2 S1408-2 S1408-1 S1409
S1411-2 S1411-1 R1410 R1418 C1407 C1409

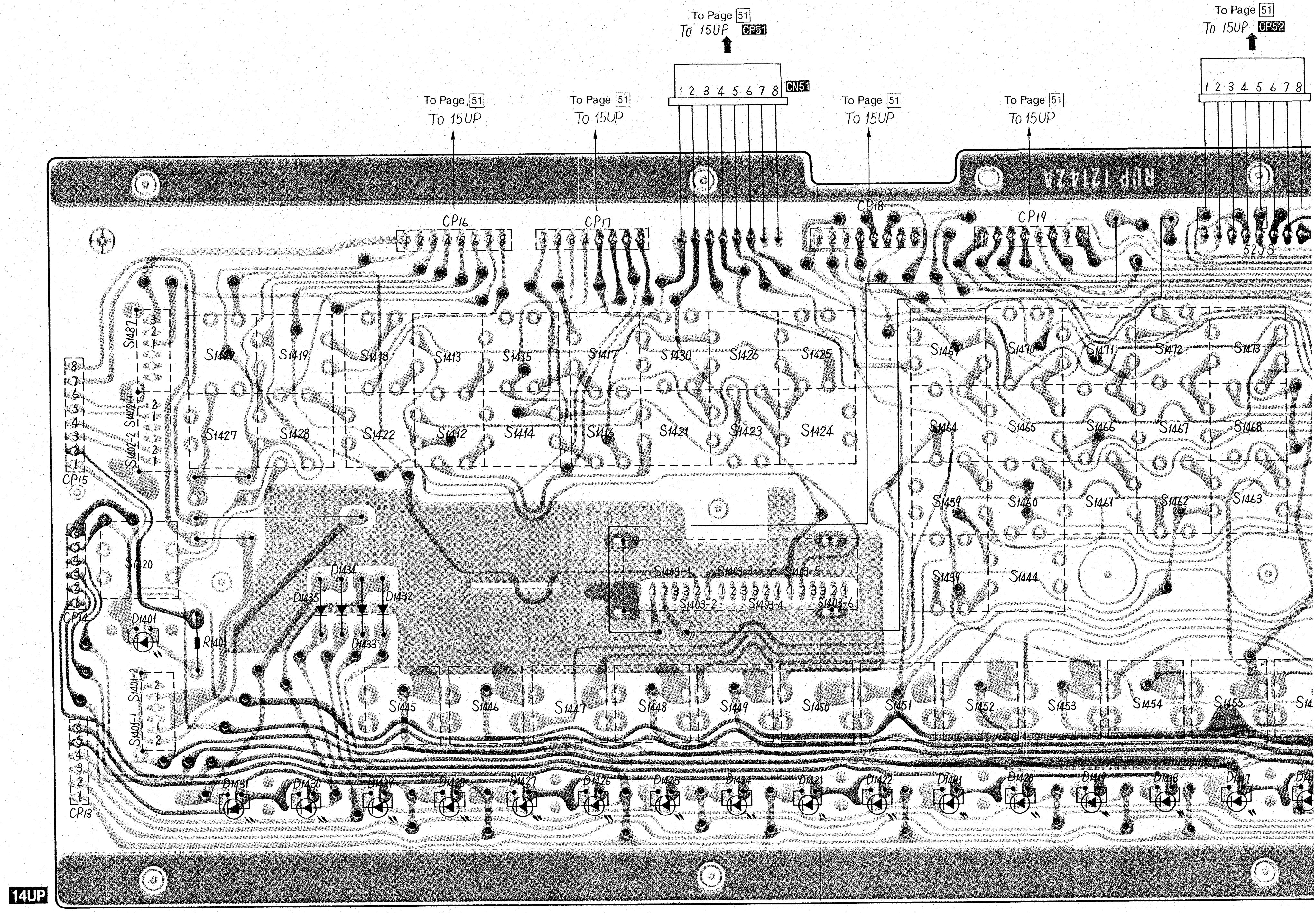
38. S1438: Direct touch tuning 101 MHz switch.
39. S1439: Scan/Stop switch.
40. S1440: Frequency step AM 1/5 kHz switch.
41. S1441: Frequency step AM 100/500 Hz switch.
42. S1442: Frequency step USB/CW 100/500 Hz switch.
43. S1143: Frequency step LSB/CW 100/500 Hz switch.
44. S1444: Memory switch.
45. S1445: Direct touch tuning 0.2 MHz switch.
46. S1446: Direct touch tuning 0.8 MHz switch.
47. S1447: Direct touch tuning 1.3 MHz switch.
48. S1448: Direct touch tuning 1.9 MHz switch.
49. S1449: Direct touch tuning 2.4 MHz switch.
50. S1450: Direct touch tuning 3.3 MHz switch.
51. S1451: Direct touch tuning 3.5 MHz switch.
52. S1452: Direct touch tuning 4.0 MHz switch.
53. S1453: Direct touch tuning 4.9 MHz switch.
54. S1454: Direct touch tuning 6.1 MHz switch.
55. S1455: Direct touch tuning 7.1 MHz switch.
56. S1456: Direct touch tuning 9.6 MHz switch.
57. S1457: Direct touch tuning 11.8 MHz switch.
58. S1458: Direct touch tuning 14.2 MHz switch.
59. S1459: Preset tuning CH1 switch.
60. S1460: Preset tuning CH2 switch.
61. S1461: Preset tuning CH3 switch.
62. S1462: Preset tuning CH4 switch.
63. S1463: Preset tuning CH5 switch.
64. S1464: Preset tuning CH6 switch.
65. S1465: Preset tuning CH7 switch.
66. S1466: Preset tuning CH8 switch.
67. S1467: Preset tuning CH9 switch.
68. S1468: Preset tuning CH10 switch.
69. S1469: Preset tuning CH11 switch.
70. S1470: Preset tuning CH12 switch.
71. S1471: Preset tuning CH13 switch.
72. S1472: Preset tuning CH14 switch.
73. S1473: Preset tuning CH15 switch.
74. S1474: Direct-Access tuning 0 switch.
75. S1475: Direct-Access tuning 1 switch.
76. S1476: Direct-Access tuning 2 switch.
77. S1477: Direct-Access tuning 3 switch.
78. S1478: Direct-Access tuning 4 switch.
79. S1479: Direct-Access tuning 5 switch.
80. S1480: Direct-Access tuning 6 switch.
81. S1481: Direct-Access tuning 7 switch.
82. S1482: Direct-Access tuning 8 switch.
83. S1483: Direct-Access tuning 9 switch.
84. S1484: Direct-Access tuning ● switch.
85. S1485: Direct-Access tuning SET switch.
86. S1486: Direct-Access tuning Frequency switch.
87. S1487: Clock adjust switch.
88. VR1401 . . . Gain control, VR1402 . . . Bass control,
VR1403 . . . Treble control, VR1404 . . . Volume control.

38. S1438: Frequenzbandschalter 101 MHz.
39. S1439: Senderabfragetaste.
40. S1440: AM-Frequenzintervallschalter 1/5 kHz.
41. S1441: AM-Frequenzintervallschalter 100/500 Hz.
42. S1442: USB/CW-Frequenzintervallschalter 100/500 Hz.
43. S1443: LSB/CW-Frequenzintervallschalter 100/500 Hz.
44. S1444: Speichertaste.
45. S1445: Frequenzbandschalter 0,2 MHz.
46. S1446: Frequenzbandschalter 0,8 MHz.
47. S1447: Frequenzbandschalter 1,3 MHz.
48. S1448: Frequenzbandschalter 1,9 MHz.
49. S1449: Frequenzbandschalter 2,4 MHz.
50. S1450: Frequenzbandschalter 3,3 MHz.
51. S1451: Frequenzbandschalter 3,5 MHz.
52. S1452: Frequenzbandschalter 4,0 MHz.
53. S1453: Frequenzbandschalter 4,9 MHz.
54. S1454: Frequenzbandschalter 6,1 MHz.
55. S1455: Frequenzbandschalter 7,1 MHz.
56. S1456: Frequenzbandschalter 9,6 MHz.
57. S1457: Frequenzbandschalter 11,8 MHz.
58. S1458: Frequenzbandschalter 14,2 MHz.
59. S1459: Festsendertaste CH1.
60. S1460: Festsendertaste CH2.
61. S1461: Festsendertaste CH3.
62. S1462: Festsendertaste CH4.
63. S1463: Festsendertaste CH5.
64. S1464: Festsendertaste CH6.
65. S1465: Festsendertaste CH7.
66. S1466: Festsendertaste CH8.
67. S1467: Festsendertaste CH9.
68. S1468: Festsendertaste CH10.
69. S1469: Festsendertaste CH11.
70. S1470: Festsendertaste CH12.
71. S1471: Festsendertaste CH13.
72. S1472: Festsendertaste CH14.
73. S1473: Festsendertaste CH15.
74. S1474: Frequenz-Direktwahltaste 0
75. S1475: Frequenz-Direktwahltaste 1
76. S1476: Frequenz-Direktwahltaste 2
77. S1477: Frequenz-Direktwahltaste 3
78. S1478: Frequenz-Direktwahltaste 4
79. S1479: Frequenz-Direktwahltaste 5
80. S1480: Frequenz-Direktwahltaste 6
81. S1481: Frequenz-Direktwahltaste 7
82. S1482: Frequenz-Direktwahltaste 8
83. S1483: Frequenz-Direktwahltaste 9
84. S1484: Frequenz-Direktwahltaste ●
85. S1485: Frequenz-Direktwahltaste SET.
86. S1486: Frequenz-Direkwahltaste FREQUENCY.
87. S1487: Uhrzeit-Einstellschalter.
88. VR1401 . . . Verstärkungsregler, VR1402 . . . Bass control.
VR1403 . . . Treble control, VR1404 . . . Volume control.



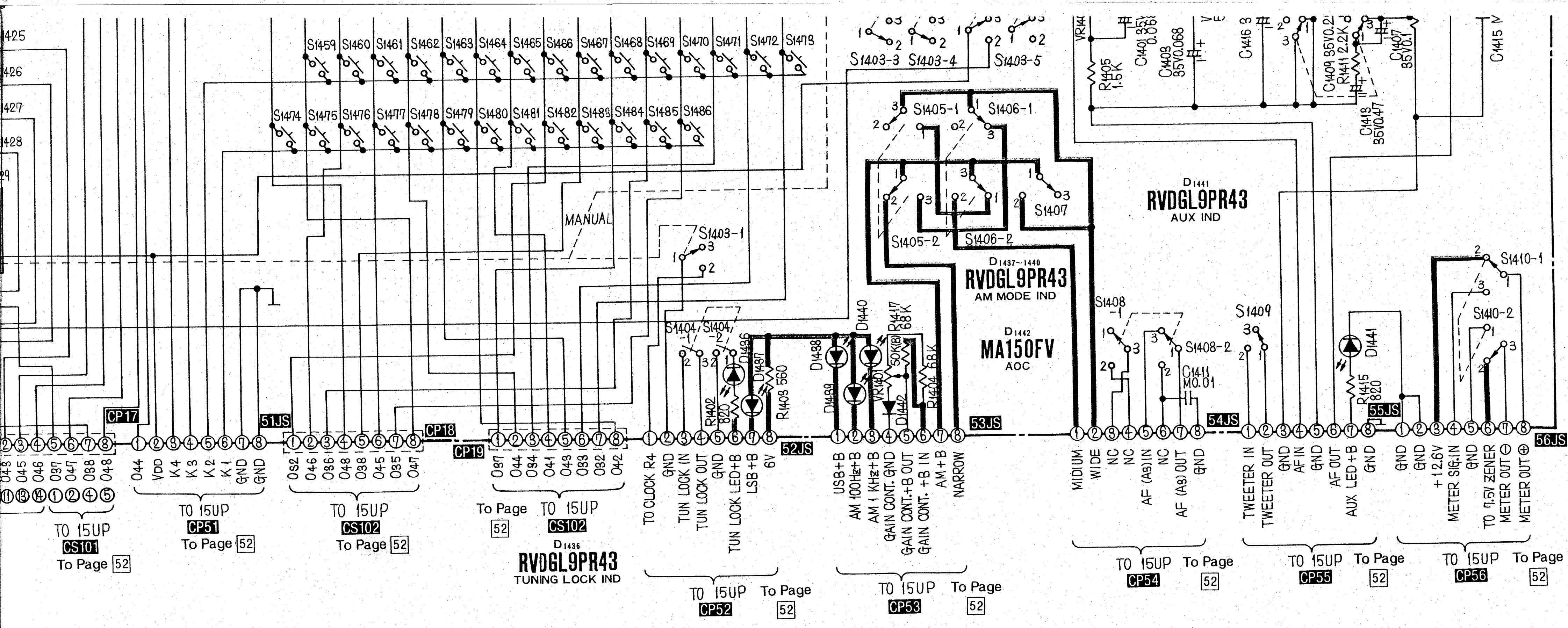
14 UP **14 UP**

CIRCUIT BOARD WIRING VIEW (1



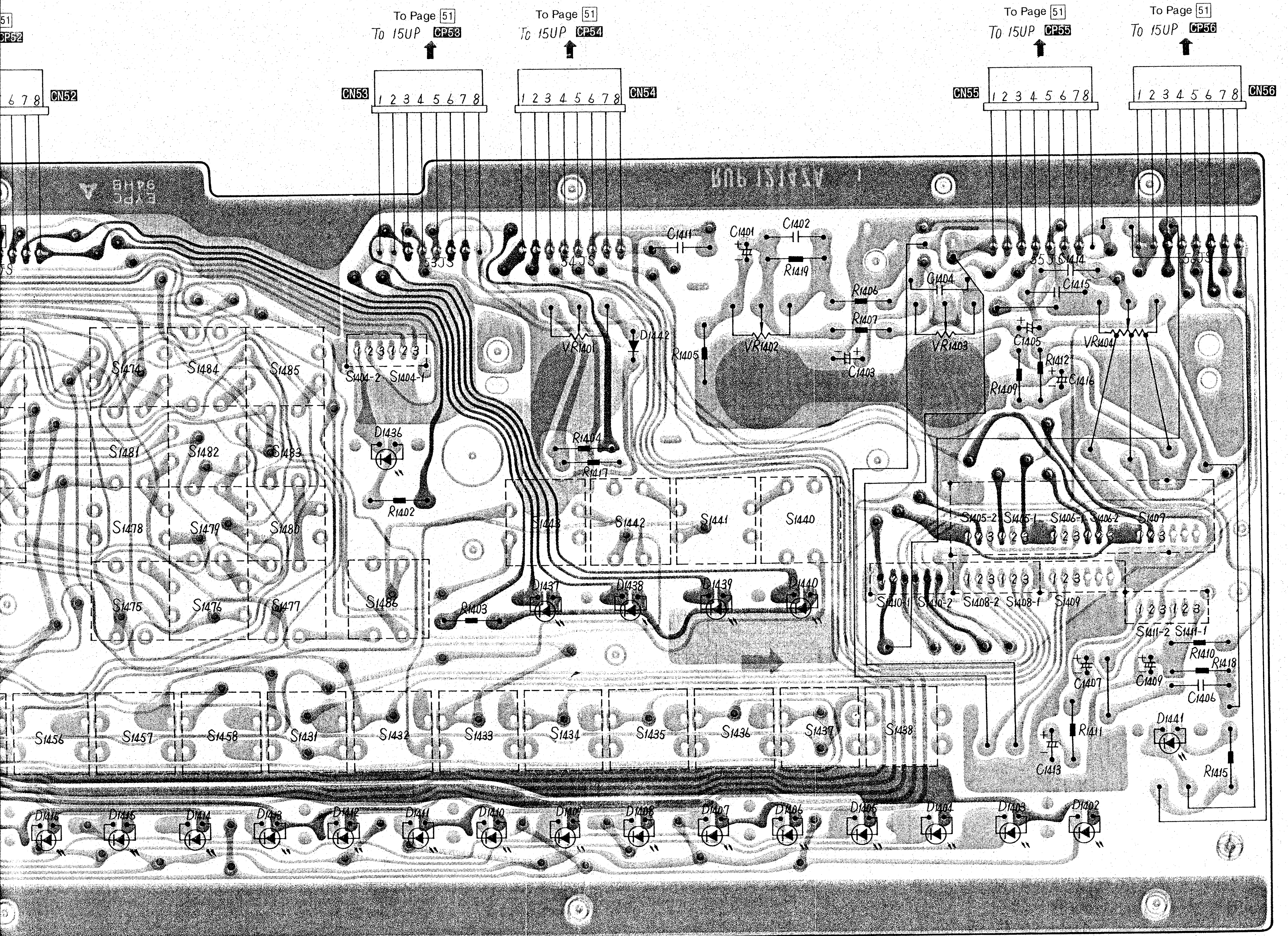
Remarques:

1. S1401: Commutateur marche/arrêt du l'éclairage en position "Arrêt".
2. S1402-1, S1402-2: Interrupteur de signal horaire.
3. S1403-1~S1403-2: Commutateur du sélecteur de programme en position "Manual" (manuel).
4. S1404-1, S1404-2: Interrupteur de blocage d'accord.
5. S1405-1, S1405-2: Interrupteur de bande AM étroite (Narrow).
6. S1406-1, S1406-2: Interrupteur de bande AM moyenne (MED).
7. S1407 : Interrupteur de bande AM garge (Wide).
8. S1408-1, S1408-2: Commutateur d'écrêteur automatique de bruit (ANL).
9. S1409: Interrupteur de haut-parleur d'aigus (Tweeter).
10. S1410-1, S1410-2: Commutateur Signal/Battery en position "Battery" (piles).
11. S1411-1, S1411-2: Interrupteur de Loudness.
12. S1412: Réglage Mois/Heure: avance.
13. S1413: Réglage Mois/Heure: retour en arrière.
14. S1414: Réglage Minutes/Date: avance.
15. S1415: Réglage Minutes/Date: retour en arrière.
16. S1416: Interrupteur d'avance de l'affichage cu canal.
17. S1417: Interrupteur de recul de l'affichage du canal.
18. S1418: Interrupteur 12/24 heures.
19. S1419: Commutateur "Sommeil".
20. S1420: Marche/arrêt.
21. S1421: Commutateur d'inversion de jour de programmation.
22. S1422: Interrupteur d'avance du jour de programmation (Day UP).
23. S1423: Interrupteur de mémoire journalière.
24. S1424: Interrupteur de contrôle de mémoire de programmation.
25. S1425: Commutateur de programmateur ON/OFF.
26. S1426: Interrupteur d'effacement de mémoire de programmation.
27. S1427: Interrupteur d'affichage Mois/Date.
28. S1428: Interrupteur d'affichage de l'heure sur un autre fuseau horaire.
29. S1429: Interrupteur d'affichage de l'heure.
30. S1430: Commutateur de programmation unique.
31. S1431: Touche de syntonisation automatique sur 15,3 MHz.
32. S1432: Touche de syntonisation automatique sur 17,8 MHz.
33. S1433: Touche de syntonisation automatique sur 21,2 MHz.
34. S1434: Touche de syntonisation automatique sur 21,6 MHz.
35. S1435: Touche de syntonisation automatique sur 25,9 MHz.
36. S1436: Touche de syntonisation automatique sur 28,5 MHz.
37. S1437: Touche de syntonisation automatique sur 95 MHz.
38. S1438: Touche de syntonisation automatique sur 101 MHz.
39. S1439: Interrupteur de lecture de mémoire et arrêt sur mémoire.
40. S1440: Interrupteur de fréquence AM pas à pas 1/5 kHz.
41. S1441: Interupteur de fréquence AM pas à pas 100/500 Hz.
42. S1442: Interrupteur de fréquence USB/CW pas à pas 100/500 Hz.
43. S1443: Interrupteur de fréquence LSB/CW pas à pas 100/500 Hz.
44. S1444: Interrupteur de mémoire.
45. S1445: Touche de syntonisation automatique sur 0,2 MHz.
46. S1446: Touche de syntonisation automatique sur 0,8 MHz.
47. S1447: Touche de syntonisation automatique sur 1,3 MHz.
48. S1448: Touche de syntonisation automatique sur 1,9 MHz.
49. S1449: Touche de syntonisation automatique sur 2,4 MHz.


S1459 S1460 S1461 S1462 S1463 S1464 S1465 S1466 S1467 S1468 S1469 S1470 S1471 S1472 S1473
S1474 S1475 S1476 S1477 S1478 S1479 S1480 S1481 S1482 S1483 S1484 S1485 S1486
MANUAL
S1403-1
S1403-3 S1403-4 S1403-5
S1405-1 S1406-1 S1405-2 S1406-2 S1407
D1437~1440 RVDGL9PR43 AM MODE IND
D1441 RVDGL9PR43 AUX IND
D1442 MA150FV AOC
D1436 RVDGL9PR43 TUNING LOCK IND
S1404 S1408-1 S1408-2 S1409 S1410-1 S1410-2
CP17 CP18 CP19 51JS 52JS 53JS 54JS 55JS 56JS
VDD K4 K3 K2 K1 GND
TO CLOCK R4 GND TUN LOCK IN TUN LOCK OUT GND TUN LOCK LED+B LSB+B 6V
USB+B AM 100Hz+B AM 1 KHz+B GAIN CONT. GND GAIN CONT.+B OUT GAIN CONT. +B IN AM+B NARROW
MIDIUM WIDE NC NC AF (A9) IN NC AF (A9) OUT GND
TWEETER IN TWEETER OUT GND AF IN GND AF OUT AUX LED+B GND
GND GND +12.6V METER SIG.IN GND TO 11.5V ZENER METER OUT ⊖ METER OUT ⊕
TO 15UP CS101 To Page 52
TO 15UP CP51 To Page 52
TO 15UP CS102 To Page 52
TO 15UP CP52 To Page 52
TO 15UP CP53 To Page 52
TO 15UP CP54 To Page 52
TO 15UP CP55 To Page 52
TO 15UP CP56 To Page 52

14 UP **14 UP**

W (14 UP)... KEY BOARD CIRCUIT


To Page 51 To 15UP CP53
To Page 51 To 15UP CP54
To Page 51 To 15UP CP55
To Page 51 To 15UP CP56
CN52 CN53 CN54 CN55 CN56
1 2 3 4 5 6 7 8
S1474 S1484 S1485 S1481 S1482 S1483 S1478 S1479 S1480 S1475 S1476 S1477 S1486
S1404-2 S1404-1 D1436 R1402 R1403 R1404 R1417
VR1401 D1442 R1405 VR1402 VR1403 VR1404 C1411 C1401 C1402 R1419 R1406 R1407 C1403 C1404 C1405 C1415 C1416 R1412 R1409
S1443 S1442 S1441 S1440 D1437 D1438 D1439 D1440
S1405-2 S1405-1 S1406-1 S1406-2 S1407 S1410-1 S1410-2 S1408-2 S1408-1 S1409 S1411-2 S1411-1
R1410 R1418 C1407 C1409 C1406 C1413 R1411 D1441 R1415
S1456 S1457 S1458 S1431 S1432 S1433 S1434 S1435 S1436 S1437 S1438
D1416 D1415 D1414 D1413 D1412 D1411 D1410 D1409 D1408 D1407 D1406 D1405 D1404 D1403 D1402

re.

50. S1450: Touche de syntonisation automatique sur 3,3 MHz.
51. S1451: Touche de syntonisation automatique sur 3,5 MHz.
52. S1452: Touche de syntonisation automatique sur 4,0 MHz.
53. S1453: Touche de syntonisation automatique sur 4,9 MHz.
54. S1454: Touche de syntonisation automatique sur 6,1 MHz.
55. S1455: Touche de syntonisation automatique sur 7,1 MHz.
56. S1456: Touche de syntonisation automatique sur 9,6 MHz.
57. S1457: Touche de syntonisation automatique sur 11,8 MHz.
58. S1458: Touche de syntonisation automatique sur 14,2 MHz.
59. S1459: Commutateur de présélection de syntonisation du canal 1.
60. S1460: Commutateur de présélection de syntonisation du canal 2.
61. S1461: Commutateur de présélection de syntonisation du canal 3.
62. S1462: Commutateur de présélection de syntonisation du canal 4.
63. S1463: Commutateur de présélection de syntonisation du canal 5.
64. S1464: Commutateur de présélection de syntonisation du canal 6.
65. S1465: Commutateur de présélection de syntonisation du canal 7.
66. S1466: Commutateur de présélection de syntonisation du canal 8.
67. S1467: Commutateur de présélection de syntonisation du canal 9.
68. S1468: Commutateur de présélection de syntonisation du canal 10.
69. S1469: Commutateur de présélection de syntonisation du canal 11.
70. S1470: Commutateur de présélection de syntonisation du canal 12.
71. S1471: Commutateur de présélection de syntonisation du canal 13.
72. S1472: Commutateur de présélection de syntonisation du canal 14.
73. S1473: Commutateur de présélection de syntonisation du canal 15.
74. S1474: Touche de syntonisation directe 0.
75. S1475: Touche de syntonisation directe 1.
76. S1476: Touche de syntonisation directe 2.
77. S1477: Touche de syntonisation directe 3.
78. S1478: Touche de syntonisation directe 4.
79. S1479: Touche de syntonisation directe 5.
80. S1480: Touche de syntonisation directe 6.
81. S1481: Touche de syntonisation directe 7.
82. S1482: Touche de syntonisation directe 8.
83. S1483: Touche de syntonisation directe 9.
84. S1484: Touche de syntonisation directe ●.
85. S1485: Touche de fin de syntonisation directe.
86. S1486: Touche de début de syntonisation directe.
87. S1487: Interrupteur de réglage de l'horloge.
88. VR1401 ... Contrôle de gain, VR1402 ... Bass control, VR1403 ... Treble control, VR1404 ... Volume control.

CIRCUIT BOARD WIRING VIEW (12 UPa, b, c) . . . POWER SUPPLY, BACK UP, TIMER OUT, CONNECTO

Q1207

	AC	DC
C	14.9V	0.4V
B	14.3V	0V
E	15V	0.4V

Q1205

	AC	DC
C	0.1V	0V
B	0.7V	0.6V
E	0V	0V

Q1208

	AC	DC
C	0.1V	0V
B	0.7V	0.6V
E	0V	0V

Q1206

	AC	DC
C	14.2V	16.3V
B	20.7V	15.7V
E	21.3V	16.5V

Q1210

	AC	DCC
C	21.3V	16.5V
B	20.9V	15.7V
E	21.6V	16.5V

Q1209

	AC	DC
C	21.3V	16.5V
B	21.6V	16.5V
E	22.2V	17.2V

Q1203

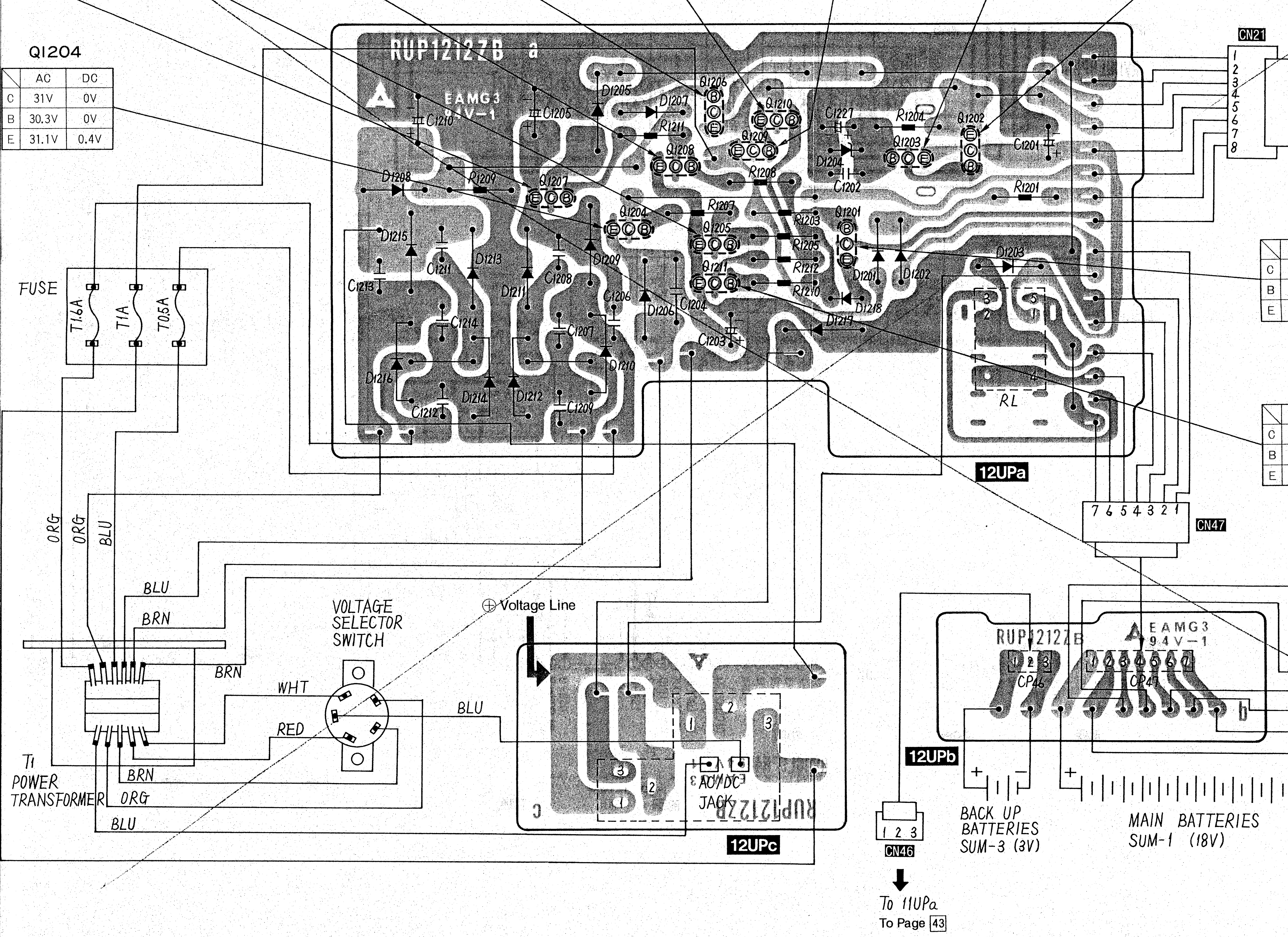
	AC	DC
C	20.6V	15.8V
B	12.6V	12.4V
E	12V	11.8V

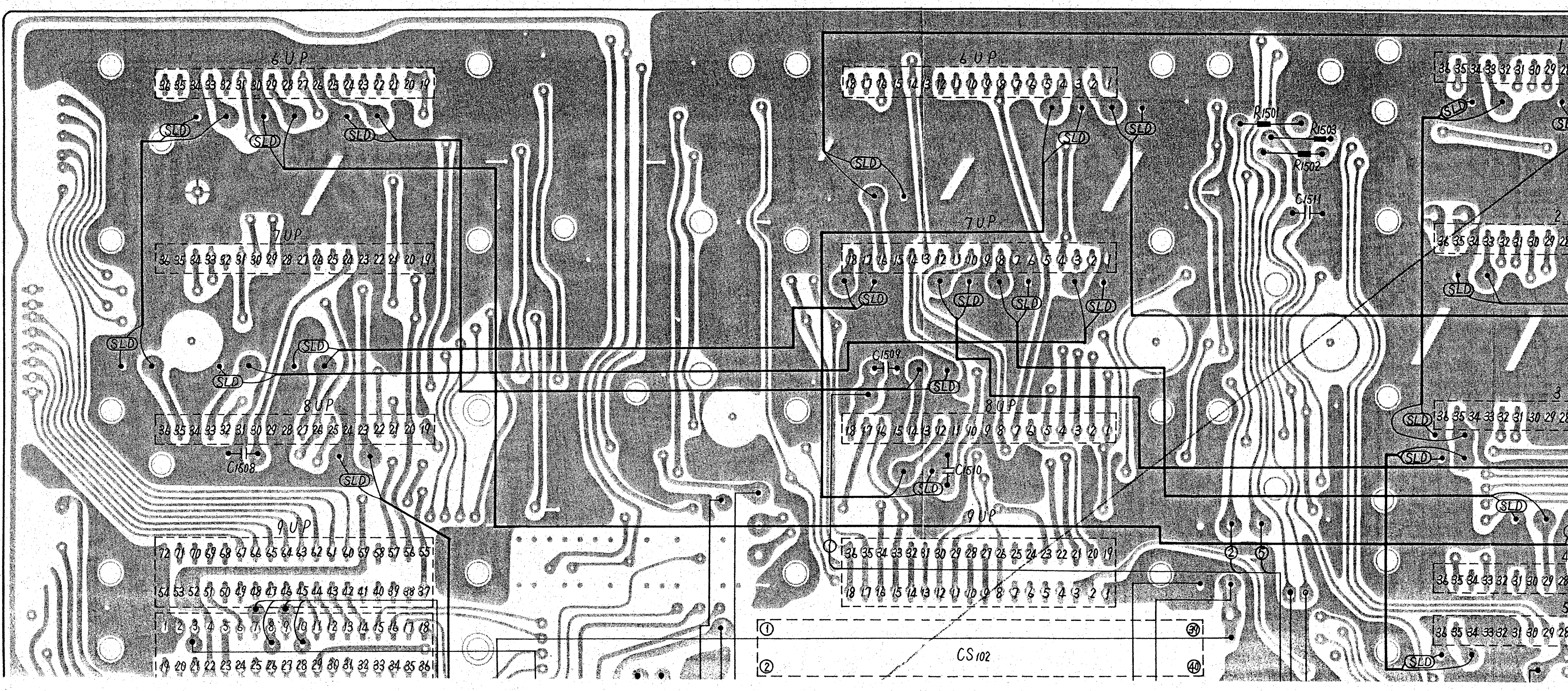
Q1202

	AC	DC
C	12V	11.8V
B	20.6V	15.8V
E	21.2V	16.4V

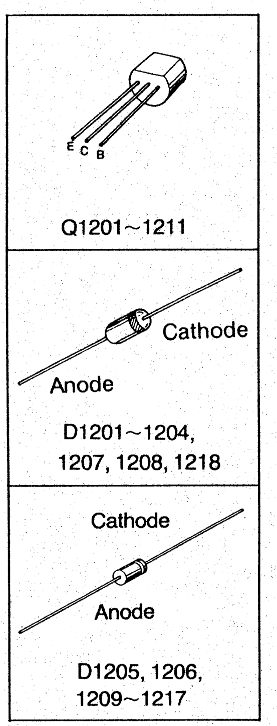
Q1204

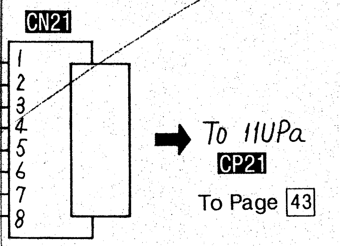
	AC	DC
C	31V	0V
B	30.3V	0V
E	31.1V	0.4V


RUP1212ZB a
EAMG3 94V-1
CN21
1 2 3 4 5 6 7 8
Q1206 Q1210 Q1209 Q1208 Q1207 Q1204 Q1205 Q1211 Q1201 Q1203 Q1202
D1205 D1207 D1208 D1215 D1213 D1211 D1209 D1206 D1216 D1214 D1212 D1210 D1204 D1201 D1202 D1203 D1218 D1217
C1210 C1205 C1211 C1213 C1208 C1214 C1207 C1206 C1204 C1203 C1212 C1209 C1227 C1202 C1201
R1211 R1209 R1208 R1207 R1203 R1205 R1212 R1210 R1204 R1201
RL
12UPa
FUSE
T1.6A T1A T0.5A
ORG ORG BLU
BLU BRN BRN WHT RED BLU BRN ORG BLU
T1 POWER TRANSFORMER
VOLTAGE SELECTOR SWITCH
⊕ Voltage Line
AC/DC JACK
RUP1212ZB
12UPc
CN47
7 6 5 4 3 2 1
RUP1212ZB
EAMG3 94V-1
CP46 CP47
12UPb
BACK UP BATTERIES SUM-3 (3V)
MAIN BATTERIES SUM-1 (18V)
1 2 3
CN46
To 11UPa
To Page 43
C B E
C B E


6UP
7UP
8UP
9UP
SLD
C1508 C1509 C1510 C1511
R1501 R1502 R1503
CS102

ECTOR & EXT DC IN CIRCUIT


E C B
Q1201~1211
Cathode
Anode
D1201~1204,
1207, 1208, 1218
Cathode
Anode
D1205, 1206,
1209~1217

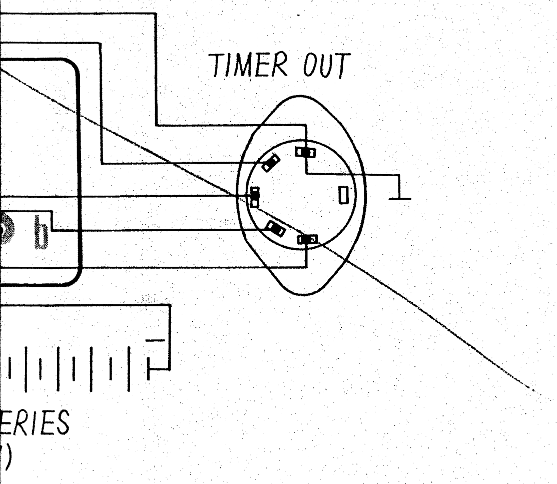

CN21
1
2
3
4
5
6
7
8
To 11UPa
CP21
To Page 43

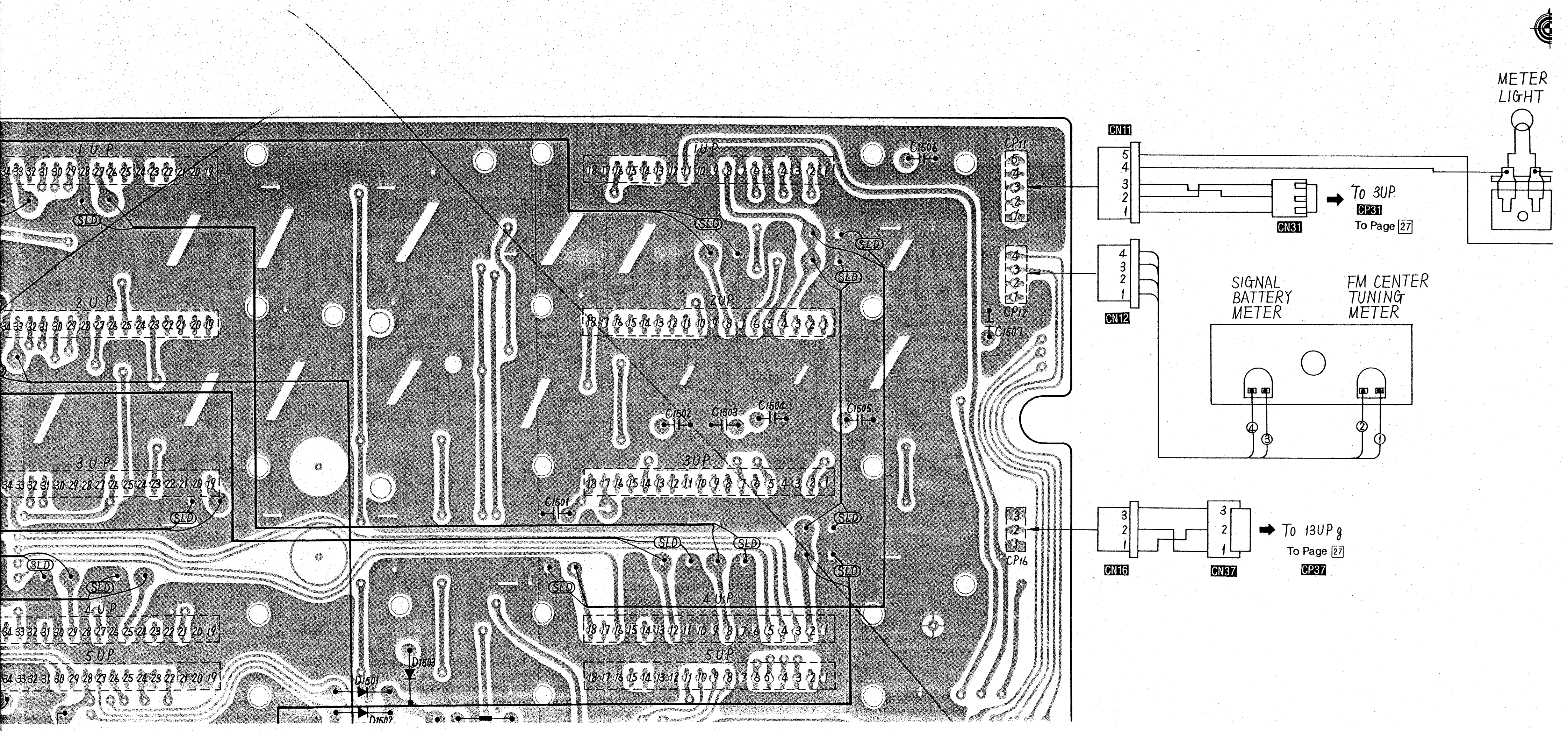
Q1201

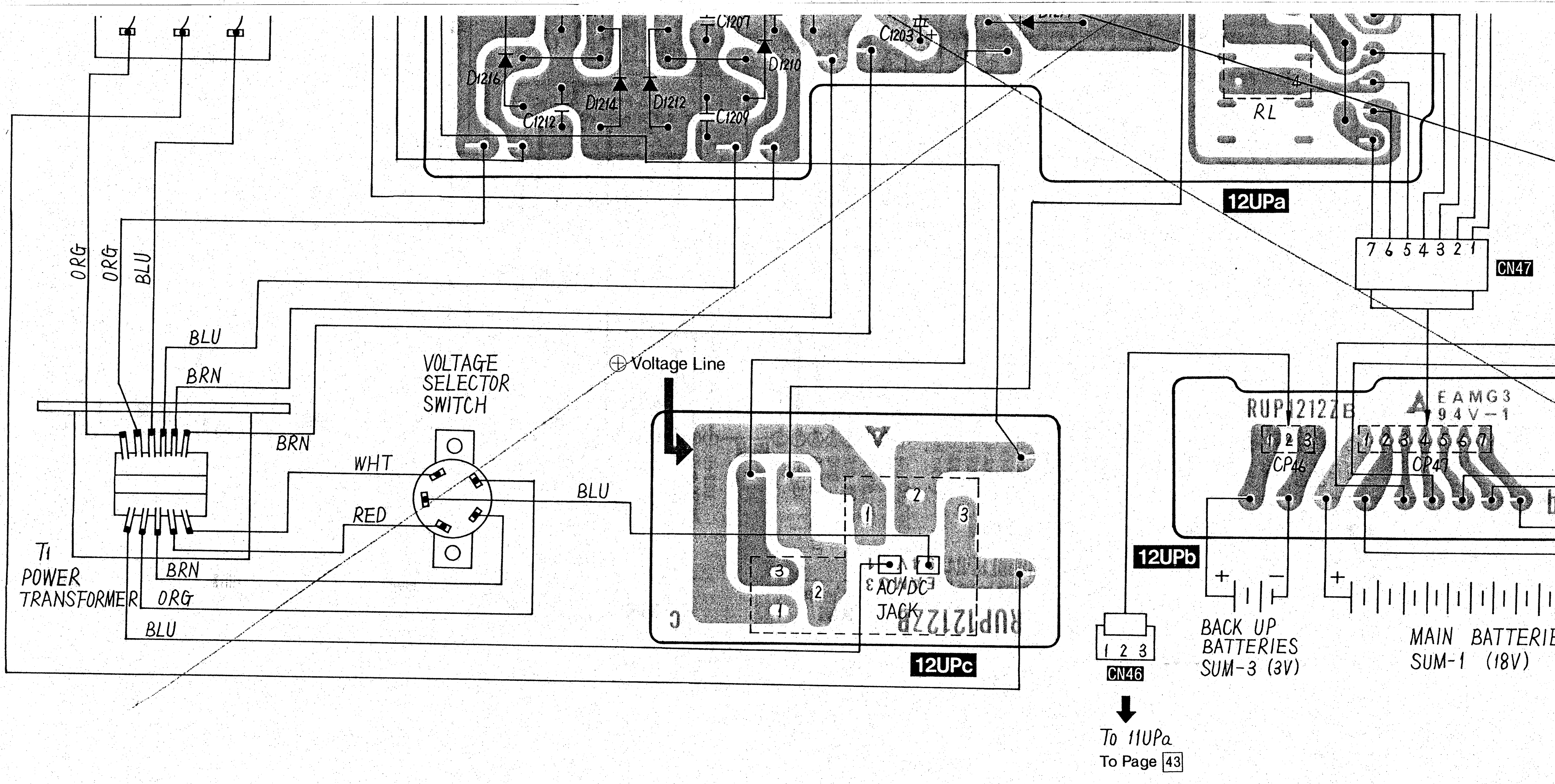
	AC	DC
C	3V	2.9V
B	3.7V	3.6V
E	3V	2.9V

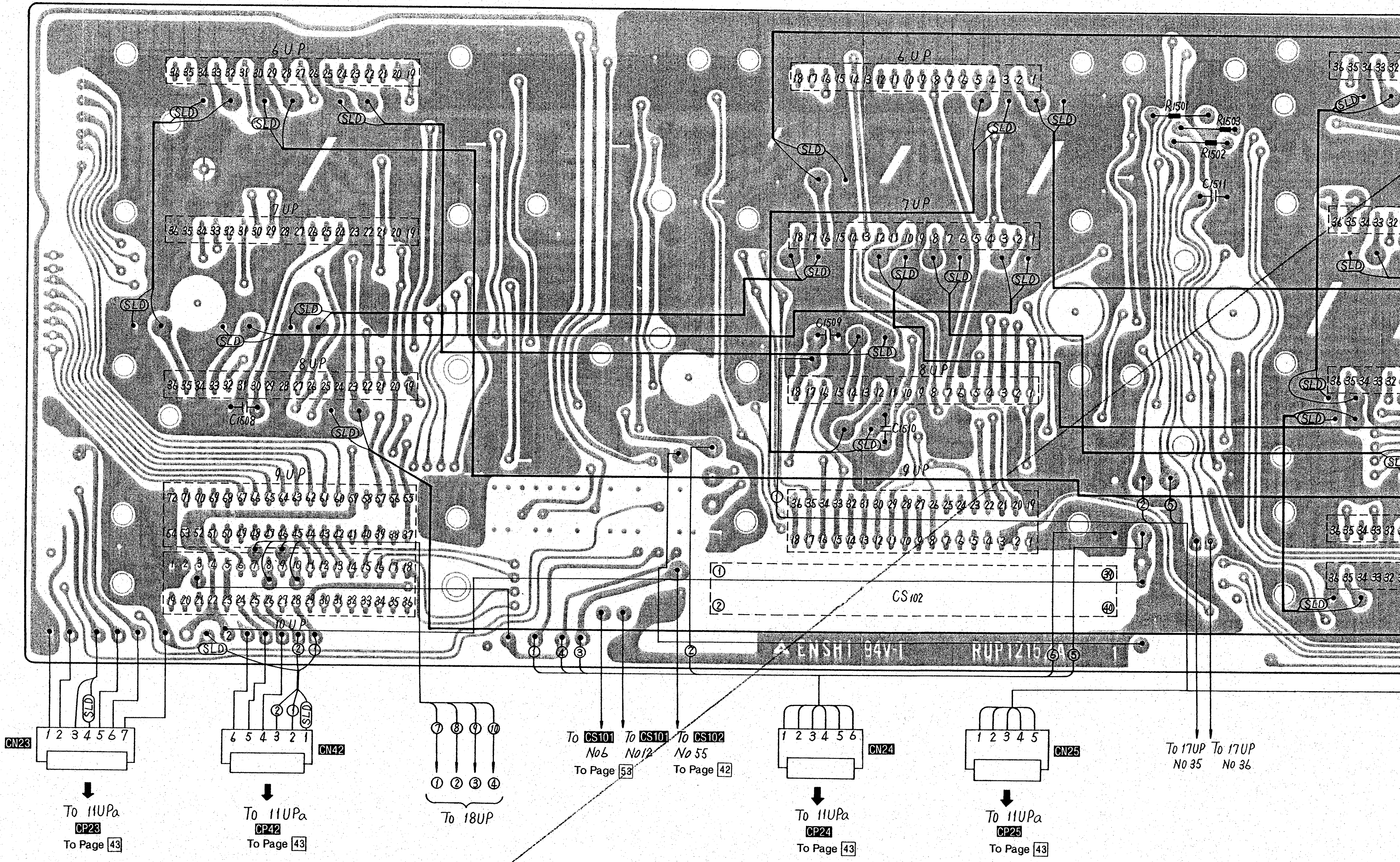
Q1211

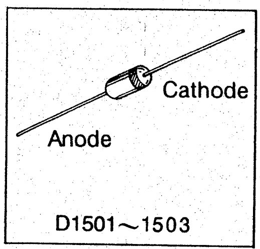
	AC	DC
C	0.1V	0V
B	0.7V	0.7V
E	0V	0V


TIMER OUT
ERIES
)


METER
LIGHT
CN11
CP11
C1506
1 UP
2 UP
3 UP
4 UP
5 UP
SLD
C1501
C1502
C1503
C1504
C1505
C1507
CP12
CP16
D1501
D1502
D1503
To 3UP
CP31
To Page 27
CN31
CN12
SIGNAL
BATTERY
METER
FM CENTER
TUNING
METER
CN16
CN37
To 13UP g
To Page 27
CP37


C1207
C1203
D1216
D1214
D1212
D1210
C1212
C1209
RL
12UPa
7 6 5 4 3 2 1
CN47
ORG
ORG
BLU
BLU
BRN
BRN
WHT
RED
BLU
BRN
ORG
BLU
T1
POWER
TRANSFORMER
VOLTAGE
SELECTOR
SWITCH
⊕ Voltage Line
AC/DC
JACK
RUP1212ZB
12UPc
RUP1212ZB
EAMG3
94V-1
CP46
CP47
12UPb
BACK UP
BATTERIES
SUM-3 (3V)
MAIN BATTERIES
SUM-1 (18V)
1 2 3
CN46
To 11UPa
To Page 43

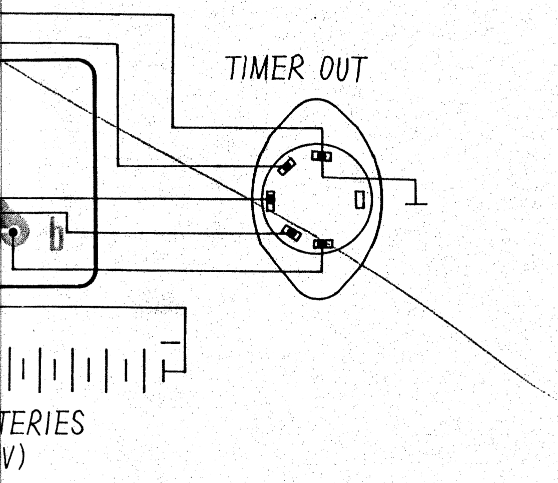

6UP
7UP
8UP
9UP
10UP
SLD
C1508
C1509
C1510
C1511
R1501
R1502
R1503
CS102
ENSHI 94V-1
RUP1215
CN23
1 2 3 4 5 6 7
To 11UPa
CP23
To Page 43
6 5 4 3 2 1
CN42
To 11UPa
CP42
To Page 43
⑦ ⑧ ⑨ ⑩
① ② ③ ④
To 18UP
To CS101 No6
To CS101 No12
To CS102 No55
To Page 53
To Page 42
1 2 3 4 5 6
CN24
To 11UPa
CP24
To Page 43
1 2 3 4 5
CN25
To 11UPa
CP25
To Page 43
To 17UP No35
To 17UP No36

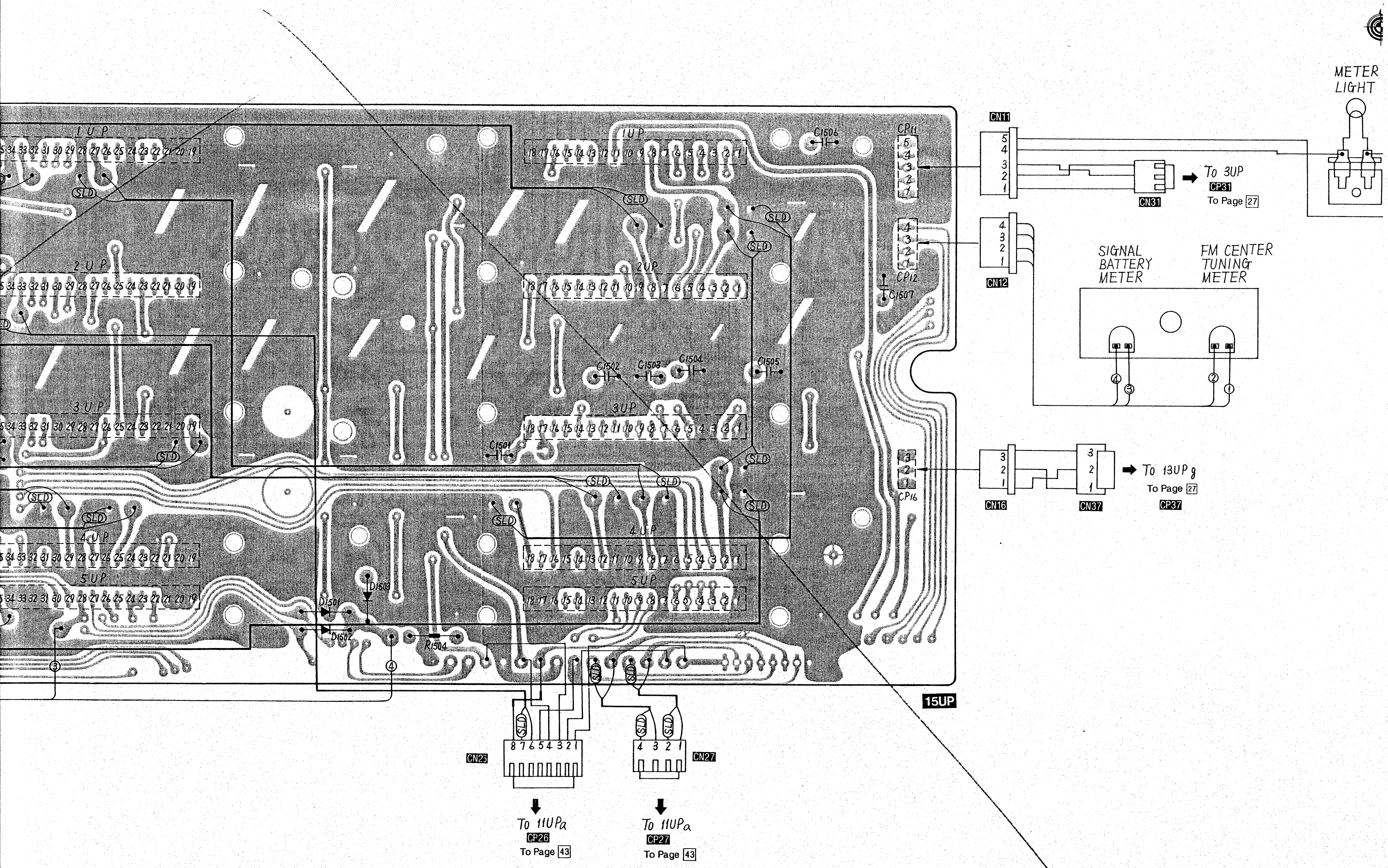

Cathode
Anode

D1501～1503

Q1211

	AC	DC
C	0.1V	0V
B	0.7V	0.7V
E	0V	0V


TIMER OUT
TERIES
V)


1UP
2UP
3UP
4UP
5UP
SLD
C1501
C1502
C1503
C1504
C1505
C1506
C1507
D1501
D1502
D1503
R1504
CP11
CP12
CP16
CN11
CN12
CN16
CN31
CN37
CN26
CN27
15UP
METER LIGHT
To 3UP
CP31
To Page 27
SIGNAL BATTERY METER
FM CENTER TUNING METER
To 13UP g
To Page 27
CP37
To 11UPa
CP26
To Page 43
To 11UPa
CP27
To Page 43